



STIC Search Report

EIC 1700

STIC Database Tracking Number: 178832

TO: Ardith Hertzog

Location: REM 9A20

Art Unit : 1754

February 8, 2006

Case Serial Number:

~~PCT/US04/05645~~ 10/786,671

From: Les Henderson

Location: EIC 1700

REM 4B28 / 4A30

Phone: 571-272-2538

Leslie.henderson@uspto.gov

Search Notes

Claim 4

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: ARDITH F. HERTZOG Examiner #: 71465 Date: 2.7.06
 Art Unit: 1754 Phone Number 30 2-1247 Serial Number: PCT-US04-05645
 Mail Box and Bldg/Room Location: Rem 9A20 Results Format Preferred (circle) PAPER DISK E-MAIL
(office)

If more than one search is submitted, please prioritize searches in order of need. (doesn't matter)

 Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched.
 Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or
 utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if
 known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Per attached BIB DATA SHEET =>

Inventors (please provide full names): 11

Earliest Priority Filing Date: 11

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

*Please search for
the compositions
of
claim 4-*

*Thank you,
Arldith*

SCIENTIFIC REFERENCE BR
Sci & Tech Inf. Cntr

FEB 7 2006

Pat. & T.M. Office

STAFF USE ONLY

Type of Search		Vendors and cost where applicable
Searcher: <u>29H</u>	NA Sequence (#) _____	STN <u>\$ 994.94</u>
Searcher Phone #: _____	AA Sequence (#) _____	Dialog _____
Searcher Location: _____	Structure (#) _____	Questel/Orbit _____
Date Searcher Picked Up: _____	Bibliographic <u>✓</u>	Dr.Link _____
Date Completed: <u>2/8/08</u>	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: <u>30</u>	Fulltext _____	Sequence Systems _____
Editorial Prep Time: <u>30</u>	Patent Family _____	WWW/Internet _____
Online Time: <u>200</u>	Other _____	Other (specify) _____

CLAIMS

Therefore, having thus described the invention, at least the following is claimed:

- 1 1. A composition, comprising:
2 a metal nitrate selected from d-block metal nitrates and f-block metal
3 nitrates; and
4 a metal salt having weakly bound counter anions, wherein the metal of the
5 metal salt having weakly bound counter anions is selected from a d-block metal
6 and an f-block metal.
- 1 2. ~~The composition of claim 1, wherein the metal nitrate is selected from iron (III)~~
2 ~~nitrate, cobalt (II) nitrate, nickel (II) nitrate, copper (II) nitrate, cerium (III) nitrate~~
3 ~~and cerium (IV) nitrate.~~
- 1 3. ~~The composition of claim 1, wherein the metal salt having weakly bound counter~~
2 ~~anions is selected from copper (II) perchlorate, copper (II)~~
3 ~~trifluoromethanesulfonate, and copper (II) tetrafluoroborate.~~
- 1 4. The composition of claim 1, wherein the metal nitrate is selected from iron (III)
2 nitrate, cobalt (II) nitrate, nickel (II) nitrate, copper (II) nitrate, cerium (III) nitrate
3 and cerium (IV) nitrate, and wherein the metal salt having weakly bound counter
4 anions is selected from copper (II) perchlorate, copper (II)
5 trifluoromethanesulfonate, and copper (II) tetrafluoroborate.
- 1 5. ~~The composition of claim 1, wherein the metal nitrate is copper nitrate and the~~
2 ~~metal salt having weakly bound counter anions is copper~~
3 ~~trifluoromethanesulfonate.~~
- 1 6. The composition of claim 1, further comprising a polyoxometalate.



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3ib Data Sheet

CONFIRMATION NO. 3022

SERIAL NUMBER 10/786,671	FILING DATE 02/25/2004 RULE	CLASS 588	GROUP ART UNIT 1754	ATTORNEY DOCKET NO. 50508-1190
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APPLICANTS

Nelya Okun, Alpharetta, GA;

Craig L. Hill, Atlanta, GA;

* CONTINUING DATA *****

This appln claims benefit of 60/449,892 02/25/2003

(PCT is based on this US case)

* FOREIGN APPLICATIONS *****

** SMALL ENTITY **

Foreign Priority claimed <input type="checkbox"/> yes <input type="checkbox"/> no	STATE OR COUNTRY GA	SHEETS DRAWING 0	TOTAL CLAIMS 58	INDEPENDENT CLAIMS 2
35 USC 119 (a-d) conditions met <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> Met after Allowance				
Verified and Acknowledged Examiner's Signature _____ Initials _____				

ADDRESS

24504
THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP
100 GALLERIA PARKWAY, NW
STE 1750
ATLANTA, GA
30339-5948

TITLE

Compositions, materials incorporating the compositions, and methods of using the compositions and materials

FILING FEE RECEIVED 792	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:	<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees (Filing) <input type="checkbox"/> 1.17 Fees (Processing Ext. of time) <input type="checkbox"/> 1.18 Fees (Issue) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit
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=> d his ful

(FILE 'HOME' ENTERED AT 09:48:09 ON 08 FEB 2006)

FILE 'HCAPLUS' ENTERED AT 09:48:36 ON 08 FEB 2006

E US20040230086/PN

L1 1 SEA ABB=ON PLU=ON US20040230086/PN
D ALL
SEL RN

FILE 'REGISTRY' ENTERED AT 09:50:45 ON 08 FEB 2006

L2 41 SEA ABB=ON PLU=ON (100-42-5/BI OR 10108-73-3/BI OR
10141-05-6/BI OR 10421-48-4/BI OR 107-92-6/BI OR
109-52-4/BI OR 110-81-6/BI OR 110-86-1/BI OR 13093-17-9
/BI OR 13138-45-9/BI OR 134360-58-0/BI OR 13770-18-8/BI
OR 3251-23-8/BI OR 34946-82-2/BI OR 352-93-2/BI OR
38465-60-0/BI OR 50-00-0/BI OR 503-74-2/BI OR 505-60-2/
BI OR 57-12-5/BI OR 59858-44-5/BI OR 624-92-0/BI OR
630-08-0/BI OR 693-07-2/BI OR 74-93-1/BI OR 7439-89-6/B
I OR 7440-22-4/BI OR 7440-33-7/BI OR 7440-38-2/BI OR
7440-45-1/BI OR 75-07-0/BI OR 75-18-3/BI OR 75-44-5/BI
OR 75-50-3/BI OR 7664-41-7/BI OR 7704-34-9/BI OR
7727-37-9/BI OR 7783-06-4/BI OR 79-09-4/BI OR 795308-36
-0/BI OR 796042-78-9/BI)
L3 6 SEA ABB=ON PLU=ON L2 AND HNO3
D SCAN
L4 13 SEA ABB=ON PLU=ON L2 AND 2/NC
D SCAN
L5 28 SEA ABB=ON PLU=ON L2 NOT L4
D SCAN
L6 7 SEA ABB=ON PLU=ON L4 NOT L3
D SCAN
L7 3069335 SEA ABB=ON PLU=ON (T1 OR T2 OR T3 OR LNTH OR ACTN OR
SHEL)/PG
L8 513926 SEA ABB=ON PLU=ON L7 AND 4/ELC.SUB
L9 3918 SEA ABB=ON PLU=ON L7 AND (H(L)N(L)O)/ELS(L)4/ELC.SUB
L10 1184 SEA ABB=ON PLU=ON L9 AND (HNO3 OR NO3)
L11 2734 SEA ABB=ON PLU=ON L9 NOT L10
L12 23 SEA ABB=ON PLU=ON L7 AND (CL(L)O)/ELS(L)3/ELC.SUB
AND CLO4
D SCAN L6
L13 3 SEA ABB=ON PLU=ON L6 AND 1/CU
D SCAN
L14 35316 SEA ABB=ON PLU=ON L7 AND (BF4 OR CHF3O3S)
L15 1447 SEA ABB=ON PLU=ON L14 NOT 1-50/NR
L16 32 SEA ABB=ON PLU=ON (L15 AND BF4) AND 3/ELC.SUB
L17 0 SEA ABB=ON PLU=ON (L15 AND CF3O3S) AND 6/ELC.SUB
L18 1158 SEA ABB=ON PLU=ON L7 AND (TRIFLATE OR TRIFLUOROMETHAN
ESULFONATE)
L19 138 SEA ABB=ON PLU=ON L18 NOT 1-100/NR
L20 77 SEA ABB=ON PLU=ON L19 AND (((C(L)H(L)F(L)O(L)S)/ELS(L)
)6/ELC.SUB) OR ((C(L)F(L)O(L)S)/ELS(L)5/ELC.SUB))
L21 3 SEA ABB=ON PLU=ON L20 AND 1/NC
D SCAN
L22 60 SEA ABB=ON PLU=ON L20 AND 2/NC
D SCAN L21
L23 14 SEA ABB=ON PLU=ON L20 NOT (L21 OR L22)
D SCAN
L24 13 SEA ABB=ON PLU=ON L23 NOT C6H9AG
L25 73 SEA ABB=ON PLU=ON L24 OR L22

FILE 'HCAPLUS' ENTERED AT 11:32:50 ON 08 FEB 2006

L26 16041 SEA ABB=ON PLU=ON L3
L27 2027 SEA ABB=ON PLU=ON L13
L28 181 SEA ABB=ON PLU=ON L26 AND L27
L29 QUE ABB=ON PLU=ON COMPOSIT? OR COMPN# OR COMPSN#

L30 20 SEA ABB=ON PLU=ON L28 (L) L29
 L31 0 SEA ABB=ON PLU=ON (L26 (L) L27) (L) L29
 L32 2 SEA ABB=ON PLU=ON (L26 (L) L27)
 D SCAN
 L33 1 SEA ABB=ON PLU=ON L26 (4A) L27
 D SCAN
 L34 20 SEA ABB=ON PLU=ON L28 AND L29
 D SCAN
 L35 QUE ABB=ON PLU=ON (MIXT# OR MIXTURE? OR BLEND? OR
 ADMIX? OR COMMIX? OR IMMIX? OR INTERMIX? OR COMPOSIT?
 OR COMPN# OR COMPSN# OR FORMULAT? OR INTERSPER?)/TI
 L36 13 SEA ABB=ON PLU=ON L28 AND L35
 D SCAN TI
 L37 1 SEA ABB=ON PLU=ON L1 AND L36
 D SCAN
 L38 429744 SEA ABB=ON PLU=ON AIR POLLUTION/SC, SX
 L39 1 SEA ABB=ON PLU=ON L38 AND L34
 L40 1 SEA ABB=ON PLU=ON L28 AND L39
 D SCAN
 L41 526458 SEA ABB=ON PLU=ON TOX?/SC, SX
 L42 2 SEA ABB=ON PLU=ON L28 AND L41
 D SCAN
 L43 1252802 SEA ABB=ON PLU=ON PHARMACOL?/SC, SX
 L44 4 SEA ABB=ON PLU=ON L28 AND L43
 D SCAN
 L45 26254 SEA ABB=ON PLU=ON WEAK? (2A) (BOND? OR BOUND? OR
 BIND?)
 L46 2 SEA ABB=ON PLU=ON L45 AND L28
 D SCAN
 L47 3664 SEA ABB=ON PLU=ON WEAK? (2A) ANION?
 L48 2 SEA ABB=ON PLU=ON L47 AND L28
 D SCAN TI
 L49 QUE ABB=ON PLU=ON CONTAMIN? OR POLLUT? OR TOX? OR
 POISON?
 L50 6 SEA ABB=ON PLU=ON L49 AND L28
 D SCAN
 L51 QUE ABB=ON PLU=ON PURE OR PURIF? OR CLEAN? OR
 DECONTAM?
 L52 5 SEA ABB=ON PLU=ON L28 AND L51
 D SCAN TI
 L53 QUE ABB=ON PLU=ON MIX? OR MIXT# OR MIXTURE? OR
 BLEND? OR ADMIX? OR COMMIX?
 L54 QUE ABB=ON PLU=ON IMMIX? OR INTERMIX? OR DOPE# OR
 DOPING# OR DOPANT# OR IMPREGNAT? OR COMPOSIT? OR
 COMPN#
 L55 QUE ABB=ON PLU=ON COMPSN# OR FORMULAT? OR COMBINAT?
 OR INTERSPER? OR AMALGAM?
 L56 64 SEA ABB=ON PLU=ON L28 AND ((L53 OR L54 OR L55))
 D SCAN TI
 L57 43 SEA ABB=ON PLU=ON L56 NOT (L30 OR L36)
 D SCAN TI
 L58 1 SEA ABB=ON PLU=ON L57 AND (L38 OR L41 OR L43)
 D SCAN
 L59 64 SEA ABB=ON PLU=ON L56 OR L30 OR L36
 L60 QUE ABB=ON PLU=ON WAR? OR EXPLO?
 L61 4 SEA ABB=ON PLU=ON L59 AND L60
 L62 59360 SEA ABB=ON PLU=ON L9
 L63 249 SEA ABB=ON PLU=ON L12
 L64 1626 SEA ABB=ON PLU=ON L16
 L65 4018 SEA ABB=ON PLU=ON L25
 L66 351 SEA ABB=ON PLU=ON L62 AND (L63 OR L64 OR L65)
 L67 281 SEA ABB=ON PLU=ON L66 NOT L28
 L68 31 SEA ABB=ON PLU=ON L67 AND L29
 L69 1 SEA ABB=ON PLU=ON L68 AND (L38 OR L41 OR L43 OR L45
 OR L47 OR L49 OR L51 OR L60)
 D SCAN

D KWIC
L70 110 SEA ABB=ON PLU=ON L67 AND (L53 OR L54 OR L55)
L71 12 SEA ABB=ON PLU=ON L70 AND (L38 OR L41 OR L43 OR L45
OR L47 OR L49 OR L51 OR L60)
D SCAN TI
L72 42 SEA ABB=ON PLU=ON L68 OR L71
L73 35 SEA ABB=ON PLU=ON OKUN N?/AU
L74 2316 SEA ABB=ON PLU=ON HILL C?/AU
L75 10 SEA ABB=ON PLU=ON L74 AND L73
D SCAN TI
L76 3 SEA ABB=ON PLU=ON L75 AND L28
D SCAN
L77 24 SEA ABB=ON PLU=ON L36 OR L39 OR L40 OR L42 OR L44 OR
L46 OR L48 OR L50 OR L52 OR L58 OR L61
L78 30 SEA ABB=ON PLU=ON L77 OR L30 OR L34
L79 25 SEA ABB=ON PLU=ON L78 NOT (L58 OR L61)
L80 5 SEA ABB=ON PLU=ON L78 NOT L79
D SCAN
L81 42 SEA ABB=ON PLU=ON L72 NOT L78
L82 12 SEA ABB=ON PLU=ON L69 OR L71
L83 30 SEA ABB=ON PLU=ON L72 NOT L82
L84 43 SEA ABB=ON PLU=ON L78 OR L82 OR L76
L85 30 SEA ABB=ON PLU=ON L72 NOT L84
D SCAN TI
L86 2 SEA ABB=ON PLU=ON L85 AND (BLEACH? OR PRESERV?)
D SCAN
L87 28 SEA ABB=ON PLU=ON L85 NOT L86
L88 45 SEA ABB=ON PLU=ON L84 OR L86

=> => d l88 1-45 ibib abs hitstr hitind

L88 ANSWER 1 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:1307651 HCAPLUS
DOCUMENT NUMBER: 144:53781
TITLE: Liquid media containing Lewis acidic reactive
compounds for storage and delivery of Lewis
basic gases
INVENTOR(S): Tempel, Daniel Joseph; Henderson, Philip
Bruce; Brzozowski, Jeffrey Richard;
Pearlstein, Ronald Martin; Gaffney, Thomas
Richard
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 11 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005276733	A1	20051215	US 2004-867068	2004 0614
EP 1607674	A1	20051221	EP 2005-12660	2005 0613
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, BA, HR, IS, YU				
JP 2006002939	A2	20060105	JP 2005-173618	2005 0614

PRIORITY APPLN. INFO.:

US 2004-867068 A

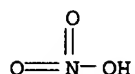
2004
0614

AB In the low-pressure storage and delivery system for gases having Lewis basicity, particularly hazardous specialty gases such as phosphine and arsine, which are utilized in the electronics industry, the gases are stored in a liquid incorporating a reactive compound having Lewis acidity capable of effecting a reversible reaction between itself and the gas having Lewis basicity. The reactive compound comprises a reactive species that is dissolved, suspended, dispersed, or otherwise mixed with a nonvolatile liquid

IT 7761-88-8, Silver nitrate (AgNO_3), uses 14104-20-2, Silver fluoroborate (AgBF_4) 38465-60-0 54761-04-5
 RL: NUU (Other use, unclassified); USES (Uses)
 (liquid media containing Lewis acidic reactive compds. for storage and delivery of Lewis basic gases)

RN 7761-88-8 HCAPLUS

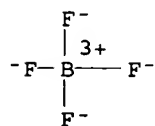
CN Nitric acid silver(1+) salt (8CI, 9CI) (CA INDEX NAME)



● Ag(I)

RN 14104-20-2 HCAPLUS

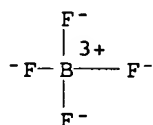
CN Borate(1-), tetrafluoro-, silver(1+) (8CI, 9CI) (CA INDEX NAME)



● Ag(I) +

RN 38465-60-0 HCAPLUS

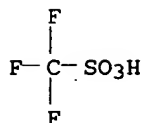
CN Borate(1-), tetrafluoro-, copper(2+) (2:1) (9CI) (CA INDEX NAME)



● 1/2 Cu(II) 2+

RN 54761-04-5 HCAPLUS

CN Methanesulfonic acid, trifluoro-, ytterbium(3+) salt (9CI) (CA INDEX NAME)



●1/3 Yb(III)

IC ICM B01J008-02

INCL 422211000

CC 48-4 (Unit Operations and Processes)

Section cross-reference(s): 59, 76

IT 65-85-0, Benzoic acid, uses 75-46-7D, Carbon trifluoride, N-alkylpyridinium, tetraalkylammonium, or tetraalkylphosphonium salts 75-93-4D, Methyl sulfate, N-alkylpyridinium, tetraalkylammonium, or tetraalkylphosphonium salts 75-98-9 104-15-4, p-Toluenesulfonic acid, uses 122-56-5, Tributylborane 142-71-2, Copper acetate 540-82-9D, Ethyl sulfate, N-alkylpyridinium, tetraalkylammonium, or tetraalkylphosphonium salts 544-92-3, Copper cyanide (Cu(CN)) 688-74-4, Tributyl borate 1109-15-5, Tris(perfluorophenyl)borane 1273-81-0, Osmocene 1287-13-4, Ruthenocene 1510-16-3, Dodecylsulfonic acid 2035-66-7, Palladium cyanide (Pd(CN)2) 2966-50-9 3112-67-2 4403-68-3 4767-03-7, Dimethylolpropionic acid 5138-18-1D, Sulfosuccinic acid, dialkyl derivs. 7439-95-4D, Magnesium, complexes with bisoxazoline 7440-05-3D, Palladium, complexes with bisoxazoline 7440-50-8D, Copper, complexes with bisoxazoline 7440-66-6D, Zinc, complexes with bisoxazoline 7446-70-0, Aluminum chloride (AlCl3), uses 7447-39-4, Cupric chloride, uses 7550-45-0, Titanium chloride (TiCl4), uses 7646-78-8, Tin chloride (SnCl4), uses 7646-85-7, Zinc chloride (ZnCl2), uses 7647-10-1, Palladium chloride (PdCl2) 7647-18-9, Antimony chloride (SbCl5) 7681-65-4, Copper iodide (CuI) 7705-08-0, Ferric chloride, uses 7718-54-9, Nickel chloride (NiCl2), uses 7758-89-6, Copper chloride (CuCl) 7761-88-8, Silver nitrate (AgNO3), uses 7772-99-8, Tin chloride (SnCl2), uses 7773-01-5, Manganese chloride (MnCl2) 7783-90-6, Silver chloride (AgCl), uses 7783-96-2, Silver iodide 7785-23-1, Silver bromide (AgBr) 7786-30-3, Magnesium chloride (MgCl2), uses 7787-70-4, Copper monobromide 9003-70-7D, Polystyrene-divinylbenzene copolymer, sulfonated 10025-82-8, Indium chloride (InCl3) 10025-91-9, Antimony chloride (SbCl3) 10026-11-6, Zirconium chloride (ZrCl4) 10026-12-7, Niobium chloride (NbCl5) 10043-52-4, Calcium chloride (CaCl2), uses 13450-90-3, Gallium chloride (GaCl3) 13454-96-1, Platinum chloride (PtCl4) 14104-20-2, Silver fluoroborate (AgBF4) 14220-26-9 14798-03-9D, Ammonium, tetraalkyl derivs. 14874-70-5D, Tetrafluoroborate, N-alkylpyridinium, tetraalkylammonium, or tetraalkylphosphonium salts 15388-37-1 16712-25-7, Copper trifluoroacetate 16722-51-3D, N-alkylpyridinium, tetraalkylammonium, or tetraalkylphosphonium salts, uses 16749-13-6D, Phosphonium, tetraalkyl derivs. 16919-18-9D, Hexafluorophosphate, N-alkylpyridinium, tetraalkylammonium, or tetraalkylphosphonium salts 16969-45-2D, Pyridinium, N-alkyl 17009-90-4D, Imidazolium, N,N'-dialkyl 17009-91-5, Pyrazolium 17009-93-7, Pyrazinium 17009-95-9, Pyrimidinium 17009-97-1, Pyridazinium 21228-90-0D, N-alkylpyridinium, tetraalkylammonium, or tetraalkylphosphonium salts 25322-68-3, Poly(ethylene oxide) 25535-55-1 27176-87-0, Dodecylbenzenesulfonic acid 28589-79-9, Thiazolium 36554-89-9 37181-39-8D, Triflate, N-alkylpyridinium,

tetraalkylammonium, or tetraalkylphosphonium salts
38465-60-0 48028-76-8D, N-alkylpyridinium,
tetraalkylammonium, or tetraalkylphosphonium salts
54761-04-5 56743-27-2, Dimethylolbutanoic acid
57048-33-6, Copper hexafluoroarsenate 57811-65-1 60821-13-8
60884-90-4 61674-41-7D, Boron fluoride (BF₄-),
N-alkylpyridinium, tetraalkylammonium, or tetraalkylphosphonium
salts 64001-57-6, Oxazolium 65039-03-4, 1-Ethyl-3-
methylimidazolium 70236-92-9 80432-08-2, 1-Butyl-3-
methylimidazolium 82113-65-3D, Bis(trifluoromethylsulfonyl)imide
, N-alkylpyridinium, tetraalkylammonium, or tetraalkylphosphonium
salts 98837-98-0D, N-alkylpyridinium, tetraalkylammonium, or
tetraalkylphosphonium salts 117288-37-6 188261-99-6
220035-23-4 220835-52-9, Platinum iodide 291300-50-0
871465-85-9 871465-86-0 871466-50-1 871466-51-2
RL: NUU (Other use, unclassified); USES (Uses)
(liquid media containing Lewis acidic reactive compds. for storage
and delivery of Lewis basic gases)

L88 ANSWER 2 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:55203 HCAPLUS

DOCUMENT NUMBER: 142:155822

TITLE: Hydrogen peroxide catalyzed alkoxylation of
nitroxyl compounds to sterically hindered
N-hydrocarbyloxyamines, especially
N-hydrocarbyloxy-2,2,6,6-piperidines

INVENTOR(S): Galbo, James Peter; Detlefsen, Robert Edward

PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.

SOURCE: PCT Int. Appl., 57 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2005005388	A1	20050120	WO 2004-EP51352	

2004
0705

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ,
CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG,
ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP,
KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL,
PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR,
TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH,
CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU,
MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI,
CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2005014948 A1 20050120 US 2004-889339

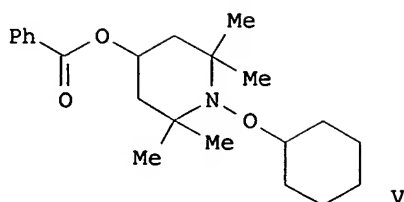
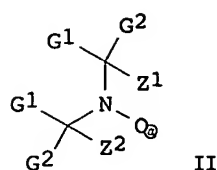
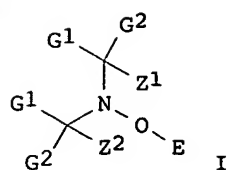
2004
0712

PRIORITY APPLN. INFO.: US 2003-486994P P

2003
0714

OTHER SOURCE(S): CASREACT 142:155822; MARPAT 142:155822

GI



AB The invention is directed to the preparation of sterically hindered N-hydrocarbyloxyamines I, well-known as thermal and light stabilizers, by alkoxylation of hindered amine N-oxyl compds. II with a hydrocarbon solvent containing no activated hydrogen atoms in the presence of hydrogen peroxide or a hydrogen peroxide equivalent, a catalytic amount of a peroxide decomposing transition metal salt, metal oxide, or metal-ligand complex, an inert cosolvent and an optionally acid [wherein G1, G2 = independently alkyl or are together pentamethylene; Z1, Z2 = each Me, or Z1 and Z2 together form a (un)substituted linking moiety; E = alkyl, cycloalkyl, bicycloalkyl, etc; with the provision that in the hydrocarbon, no carbon atom attached to an aromatic ring is substituted by H]. The advantages include use of less toxic solvents, cheap oxidation reagents, absence of additives, and lower reaction temperature. Thus, dropwise addition at reflux over 4.75 h of 50% aqueous H₂O₂ to a preheated mixture containing FeSO₄•7H₂O (III), CH₃SO₃H (IV), 1-oxyl-4-benzoyloxy-2,2,6,6-tetramethylpiperidine, acetonitrile and hexane, with addnl. portions of III and IV added after 1 and 2.25 h after the peroxide addition started, gave 65% V.

IT 10421-48-4, Iron(III) nitrate 34946-82-2,

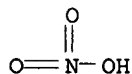
Copper(II) trifluoromethanesulfonate

RL: CAT (Catalyst use); USES (Uses)

(preparation of sterically hindered N-hydrocarbyloxyamines, in particular N-hydrocarbyloxy-2,2,6,6-piperidines, by hydrogen peroxide catalyzed alkoxylation of N-oxyl compds.)

RN 10421-48-4 HCAPLUS

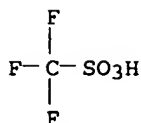
CN Nitric acid, iron(3+) salt (8CI, 9CI) (CA INDEX NAME)



●1/3 Fe(III)

RN 34946-82-2 HCAPLUS

CN Methanesulfonic acid, trifluoro-, copper(2+) salt (9CI) (CA INDEX NAME)



● 1/2 Cu(II)

IC ICM C07D211-94

CC 27-16 (Heterocyclic Compounds (One Hetero Atom))

Section cross-reference(s): 45

IT 124-43-6, Urea hydrogen peroxide 516-03-0, Iron(II) oxalate
 818-08-6, Dibutyltin oxide 992-92-7, Titanium tetramethoxide
 1282-37-7, Ferrocenium tetrafluoroborate 1309-37-1, Iron(III)
 oxide, uses 1317-38-0, Copper(II) oxide, uses 1317-39-1,
 Copper(I) oxide, uses 1317-61-9, Iron oxide (Fe₃O₄), uses
 1345-25-1, Iron(II) oxide, uses 2944-66-3 3094-87-9, Iron(II)
 acetate 3522-50-7, Iron(III) citrate 5593-70-4, Titanium
 tetrabutoxide 5781-22-6, Iron(II) trifluoroacetate 7439-89-6,
 Iron, uses 7440-50-8, Copper, uses 7447-39-4, Copper(II)
 chloride, uses 7646-78-8, Tin tetrachloride, uses 7646-79-9,
 Cobalt(II) chloride, uses 7705-07-9, Titanium(III) chloride,
 uses 7705-08-0, Iron(III) chloride, uses 7718-98-1, Vanadium
 trichloride 7722-84-1, Hydrogen peroxide, uses 7758-89-6,
 Copper(I) chloride 7758-94-3, Iron(II) chloride 7758-98-7,
 Copper(II) sulfate, uses 7773-01-5, Manganese dichloride
 7790-86-5, Cerium trichloride 10028-22-5, Iron(III) sulfate
 10421-48-4, Iron(III) nitrate 10580-52-6, Vanadium
 dichloride 11077-24-0, Ferrocenium hexafluorophosphate
 13537-24-1, Iron(III) perchlorate 13933-23-8, Iron(II)
 perchlorate 14024-17-0, Iron(II) acetylacetonate 15283-51-9,
 Iron(II) tetrafluoroborate 16712-25-7, Copper(II)
 trifluoroacetate 23383-11-1, Ferrous citrate 34946-82-2
 , Copper(II) trifluoromethanesulfonate 60344-03-8, Ferrous
 pivalate 77214-82-5, Iron(III) p-toluenesulfonate 125689-93-2
 138124-32-0 176763-62-5

RL: CAT (Catalyst use); USES (Uses)

(preparation of sterically hindered N-hydrocarbyloxyamines, in
 particular N-hydrocarbyloxy-2,2,6,6-piperidines, by hydrogen
 peroxide catalyzed alkoxylation of N-oxyl compds.)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE
 FOR THIS RECORD. ALL CITATIONS AVAILABLE
 IN THE RE FORMAT

L88 ANSWER 3 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:999712 HCAPLUS

DOCUMENT NUMBER: 141:427184

TITLE: **Compositions**, materials
 incorporating the **compositions**, and
 methods of using the **compositions**
 and materials

INVENTOR(S): Okun, Nelya; Hill, Craig L.

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 8 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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*(Ship
case)*

WO 2005021435	A2	20050310	WO 2004-US5645	2004 0225
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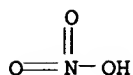
PRIORITY APPLN. INFO.: US 2003-449892P P 2003 0225

US 2004-786671 A

2004
0225

RL: CAT (Catalyst use); USES (Uses)
(catalytic **comps.** for removal of
contaminants such as **warfare** agents, and
materials incorporating these **comps.**)

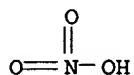
571-272-2538



●1/2 Cu(II)

RN 10108-73-3 HCAPLUS

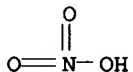
CN Nitric acid, cerium(3+) salt (8CI, 9CI) (CA INDEX NAME)



●1/3 Ce(III)

RN 10141-05-6 HCAPLUS

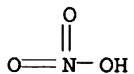
CN Nitric acid, cobalt(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Co(II)

RN 10421-48-4 HCAPLUS

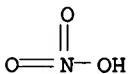
CN Nitric acid, iron(3+) salt (8CI, 9CI) (CA INDEX NAME)



●1/3 Fe(III)

RN 13093-17-9 HCAPLUS

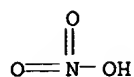
CN Nitric acid, cerium(4+) salt (8CI, 9CI) (CA INDEX NAME)



●1/4 Ce(IV)

RN 13138-45-9 HCAPLUS

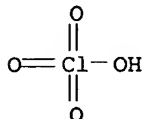
CN Nitric acid, nickel(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Ni(II)

RN 13770-18-8 HCAPLUS

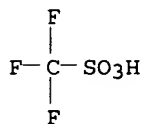
CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

RN 34946-82-2 HCAPLUS

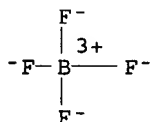
CN Methanesulfonic acid, trifluoro-, copper(2+) salt (9CI) (CA INDEX NAME)



●1/2 Cu(II)

RN 38465-60-0 HCAPLUS

CN Borate(1-), tetrafluoro-, copper(2+) (2:1) (9CI) (CA INDEX NAME)



●1/2 Cu(II) 2+

IC ICM A62D003-00

ICS C11D001-00

INCL 588205000

CC 59-2 (Air Pollution and Industrial Hygiene)

Section cross-reference(s): 4

ST polyoxymetalate nitrate copper catalytic oxidn warfare agent

IT Biological warfare agents

Chemical warfare agents

Coating materials

Environmental pollution control

Oxidation catalysts

Powders

Textiles

(catalytic compns. for removal of
contaminants such as warfare agents, and
materials incorporating these compns.)

IT Aldehydes, processes

RL: ADV (Adverse effect, including toxicity); CPS (Chemical
process); PEP (Physical, engineering or chemical process); POL
(Pollutant); REM (Removal or disposal); BIOL (Biological study);
OCCU (Occurrence); PROC (Process)

(catalytic compns. for removal of
contaminants such as warfare agents, and
materials incorporating these compns.)

IT Oxidation

(catalytic; catalytic compns. for removal of
contaminants such as warfare agents, and
materials incorporating these compns.)

IT Drug delivery systems

(topical; catalytic compns. for removal of
contaminants such as warfare agents, and
materials incorporating these compns.)

IT Heteropoly acids

RL: CAT (Catalyst use); USES (Uses)
(tungstates, complexes with iron, silver, and/or cerium;
catalytic compns. for removal of contaminants
such as warfare agents, and materials incorporating
these compns.)

IT 7727-37-9D, Nitrogen, compds.

RL: ADV (Adverse effect, including toxicity); CPS (Chemical
process); PEP (Physical, engineering or chemical process); POL
(Pollutant); REM (Removal or disposal); BIOL (Biological study);
OCCU (Occurrence); PROC (Process)

(aliphatic; catalytic compns. for removal of
contaminants such as warfare agents, and
materials incorporating these compns.)

IT 7440-33-7D, Tungsten, heteropoly compds. containing, complexes with
iron 59858-44-5 134360-58-0 795308-36-0 796042-78-9

RL: CAT (Catalyst use); USES (Uses)
(as polyoxometalate; catalytic compns. for removal of
contaminants such as warfare agents, and
materials incorporating these compns.)

IT 50-00-0, Formaldehyde, processes 57-12-5D, Cyanide, compds.

74-93-1, Methyl mercaptan, processes 75-07-0, Acetaldehyde,
processes 75-18-3, Dimethyl sulfide 75-44-5, Phosgene
75-50-3, Trimethylamine, processes 79-09-4, Propionic acid,
processes 100-42-5, Styrene, processes 107-92-6, Butyric acid,
processes 109-52-4, Valeric acid, processes 110-81-6, Diethyl
disulfide 110-86-1, Pyridine, processes 352-93-2, Diethyl
sulfide 503-74-2, Iso-valeric acid 505-60-2, Mustard gas
624-92-0 630-08-0, Carbon monoxide, processes 693-07-2,
2-Chloroethyl ethyl sulfide 7440-38-2D, Arsenic, compds.
7664-41-7, Ammonia, processes 7704-34-9D, Sulfur, compds.
7783-06-4, Hydrogen sulfide, processes

RL: ADV (Adverse effect, including toxicity); CPS (Chemical
process); PEP (Physical, engineering or chemical process); POL
(Pollutant); REM (Removal or disposal); BIOL (Biological study);
OCCU (Occurrence); PROC (Process)

(catalytic compns. for removal of
contaminants such as warfare agents, and
materials incorporating these compns.)

IT 3251-23-8, Copper (II) nitrate 7439-89-6D, Iron,
complexes with heteropolytungstates 7440-22-4D, Silver,
complexes with heteropolytungstates 7440-45-1D, Cerium,
complexes with heteropolytungstates 10108-73-3, Cerium

(III) nitrate 10141-05-6, Cobalt (II) nitrate
10421-48-4, Iron (III) nitrate 13093-17-9
13138-45-9, Nickel (II) nitrate 13770-18-8,
Copper (II) perchlorate 34946-82-2, Copper (II)
trifluoromethanesulfonate 38465-60-0, Copper (II)
tetrafluoroborate

RL: CAT (Catalyst use); USES (Uses)
(catalytic compns. for removal of
contaminants such as warfare agents, and
materials incorporating these compns.)

L88 ANSWER 4 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:783717 HCAPLUS

DOCUMENT NUMBER: 142:12991

TITLE: Tuning the Emission Color of
Europium-Containing Ionic Liquid-Crystalline
Phases

AUTHOR(S): Guillet, Erwann; Imbert, Daniel; Scopelliti,
Rosario; Buenzli, Jean-Claude G.

CORPORATE SOURCE: Laboratory of Lanthanide Supramolecular
Chemistry, Swiss Federal Institute of
Technology, Lausanne, CH-1005, Switz.

SOURCE: Chemistry of Materials (2004), 16(21),
4063-4070

CODEN: CMATEX; ISSN: 0897-4756

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Luminescent liquid-crystalline phases are produced by introducing trivalent Eu salts, EuY₃ (Y = Cl, NO₃, ClO₄, CF₃SO₃), in room-temperature ionic liqs. (RTIL) derived from 1-alkyl-3-methylimidazolium, [C_n-mim]X (X = Cl, NO₃; n = 12-18). Four new ionic liqs. are synthesized (X = NO₃⁻, n = 12, 14, 16, 18) and characterized, and the structure of [C12-mim]Cl is elucidated by x-ray diffraction. DSC and polarized light microscopy demonstrate that the liquid-crystalline properties of Eu-containing [C12-mim]Cl are not much affected up to a salt concentration of 10 mol %, except for the mesogenic window which is enlarged. The RTIL displays a blue fluorescence and its intensity decreases substantially upon the introduction of EuIII salts, pointing to energy transfer from the RTIL to the metal ion. A high-resolution luminescence study conducted both at room and low (10 K) temperature unambiguously demonstrates that the 5 mol % solns. contain a single solvated EuIII species; when the counterion is Cl⁻, ClO₄⁻, or CF₃SO₃⁻, it appears to be a polychloro complex with a low symmetry derived from an idealized cubic symmetry. In the case of nitrate, a stronger anion-EuIII interaction results in an emission spectrum in which the hypersensitive metal-centered red transition (5D₀ → 7F₂) predominates. As a matter of fact, the emission color of the liquid-crystalline phases can be easily turned from blue to red, depending on the excitation wavelength and the counterion Y, as demonstrated by the trichromatic coordinates of these materials.

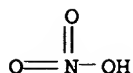
IT 7761-88-8, Silver nitrate, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(tuning the emission color of europium-containing
1-alkyl-3-methylimidazolium nitrate ionic liquid-crystalline phases
prepared using)

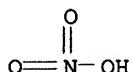
RN 7761-88-8 HCAPLUS

CN Nitric acid silver(1+) salt (8CI, 9CI) (CA INDEX NAME)



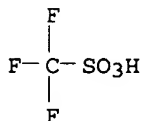
● Ag(I)

IT 10138-01-9, Europium nitrate (Eu(NO₃)₃) 52093-25-1
 , Europium trifluoromethanesulfonate
 RL: CPS (Chemical process); MOA (Modifier or additive use); PEP
 (Physical, engineering or chemical process); PRP (Properties);
 PROC (Process); USES (Uses)
 (tuning the emission color of europium-containing ionic liquid-crystalline
 phases)
 RN 10138-01-9 HCAPLUS
 CN Nitric acid, europium(3+) salt (8CI, 9CI) (CA INDEX NAME)



● 1/3 Eu(III)

RN 52093-25-1 HCAPLUS
 CN Methanesulfonic acid, trifluoro-, europium(3+) salt (9CI) (CA
 INDEX NAME)



● 1/3 Eu(III)

CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related
 Properties)
 Section cross-reference(s): 69, 75, 77
 ST europium **dopant** imidazolium deriv salt fluorescence
 tuning; thermooptical fluorescence europium **dopant**
 imidazolium deriv salt; energy transfer europium **dopant**
 imidazolium deriv salt fluorescence tuning; NMR spectra europium
dopant imidazolium dodecyl methylimidazolium chloride; IR
 spectra europium **dopant** imidazolium dodecyl
 methylimidazolium chloride; mass spectra europium **dopant**
 imidazolium dodecyl methylimidazolium chloride; hydrogen bond
 length imidazolium dodecyl methylimidazolium chloride monohydrate;
 structure imidazolium dodecyl methylimidazolium chloride
 monohydrate; carbon bond length imidazolium dodecyl
 methylimidazolium chloride monohydrate; **explosion**
 europium perchlorate **dopant** imidazolium dodecyl
 methylimidazolium nitrate; DSC europium **dopant**
 imidazolium deriv ionic liq crystal; lifetime fluorescence
 europium **dopant** imidazolium deriv ionic liq crystal; UV
 visible spectra europium **dopant** imidazolium deriv liq

crystal; refractive index europium dopant imidazolium
deriv ionic liq crystal; phase transition enthalpy temp mesogenic
imidazolium deriv nitrate

IT **Explosion**

Safety

(Eu perchlorate doping of 1-dodecyl-3-methylimidazolium nitrate liquid crystal in relation to)

IT **Doping**

(Eu salt doping of 1-dodecyl-3-methylimidazolium liquid crystals salts)

IT **7761-88-8, Silver nitrate, reactions**

RL: RCT (Reactant); RACT (Reactant or reagent)

(tuning the emission color of europium-containing
1-alkyl-3-methylimidazolium nitrate ionic liquid-crystalline phases
prepared using)

IT **10025-76-0, Europium chloride (EuCl₃) 10138-01-9,
Europium nitrate (Eu(NO₃)₃) 13537-22-9, Europium perchlorate
(Eu(ClO₄)₃) 52093-25-1, Europium
trifluoromethanesulfonate**

RL: CPS (Chemical process); MOA (Modifier or additive use); PEP
(Physical, engineering or chemical process); PRP (Properties);
PROC (Process); USES (Uses)

(tuning the emission color of europium-containing ionic liquid-crystalline
phases)

REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE
FOR THIS RECORD. ALL CITATIONS AVAILABLE
IN THE RE FORMAT

L88 ANSWER 5 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:740030 HCAPLUS

DOCUMENT NUMBER: 141:268649

TITLE: Organometallic precursor for forming metal
film or pattern and method of forming metal
film or pattern using the same

INVENTOR(S): Son, Hae Jung; Hwang, Euk Che; Lee, Sang Yoon;
Hwang, Soon Taik; Yun, Byong Ki

PATENT ASSIGNEE(S): S. Korea

SOURCE: U.S. Pat. Appl. Publ., 12 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 2004176623	A1	20040909	US 2003-676031	

2003
1002

PRIORITY APPLN. INFO.: KR 2003-13419 A

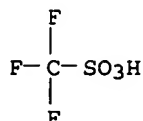
2003
0304

OTHER SOURCE(S): MARPAT 141:268649

AB The object of this invention is to provide an organometallic
precursor for forming a metal film or pattern and a method of
forming the metal film or pattern using the same. More
particularly, the present invention provides an organometallic
precursor containing a hydrazine-based compound coordinated with a
central metal thereof, and a method of forming a metal film or
pattern using the same. Further, the present invention provides a
composition containing an organometallic compound and a
hydrazine-based compound, and a method of forming a metal film or
pattern using the same. Addnl., the present invention is
advantageous in that a pure metal film or pattern is

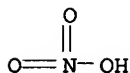
formed using the organometallic precursor or composition through a simple procedure without limiting atmospheric conditions at a low temperature, and the film or pattern thus formed has excellent conductivity and morphol. Therefore, the film is useful in an electronic device field including flexible displays and large-sized TFT-LCD.

IT 2923-28-6, Silver trifluoromethane sulfonate
 7761-88-8, Silver nitrate, reactions 14104-20-2,
 Silver tetrafluoroborate
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of organometallic precursor for forming metal film for
 integrated circuit)
 RN 2923-28-6 HCAPLUS
 CN Methanesulfonic acid, trifluoro-, silver(1+) salt (8CI, 9CI) (CA
 INDEX NAME)



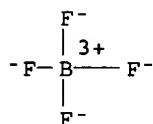
● Ag(I)

RN 7761-88-8 HCAPLUS
 CN Nitric acid silver(1+) salt (8CI, 9CI) (CA INDEX NAME)



● Ag(I)

RN 14104-20-2 HCAPLUS
 CN Borate(1-), tetrafluoro-, silver(1+) (8CI, 9CI) (CA INDEX NAME)



● Ag(I) +

IC ICM C07F009-00
 ICS C07F015-00
 INCL 556042000; 556137000
 CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and
 Other Reprographic Processes)
 Section cross-reference(s): 29, 76
 IT 613-94-5, Benzoichydrazide 870-46-2, tert-Butylcarbazate
 1068-57-1, Acetichydrazide 2923-28-6, Silver
 trifluoromethane sulfonate 2966-50-9, Silver trifluoroacetate
 7761-88-8, Silver nitrate, reactions 14104-20-2,

Silver tetrafluoroborate 26042-64-8, Silver hexafluoroantimonate
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of organometallic precursor for forming metal film for
 integrated circuit)

L88 ANSWER 6 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:59405 HCAPLUS

DOCUMENT NUMBER: 140:129836

TITLE: Non-toxic corrosion-protection
 pigments based on manganese

INVENTOR(S): Sturgill, Jeffrey A.; Phelps, Andrew Wells

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 159 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004011252	A1	20040122	US 2003-341435	2003 0113
WO 2004065305	A1	20040805	WO 2003-US38192	2003 1126

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA,
 CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES,
 FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
 KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG,
 MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO,
 RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ,
 UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
 RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW,
 AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY,
 CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC,
 NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA,
 GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2003-341435 A
 2003
 0113

AB Corrosion-inhibiting pigments based on manganese are described that contain a trivalent or tetravalent manganese/valence stabilizer complex. An inorg. or organic material is used to stabilize the trivalent or tetravalent manganese ion to form a compound that is sparingly soluble, exhibits low solubility, or is insol. in water, depending upon the intended usage. Specific stabilizers are chosen to control the release rate of trivalent or tetravalent manganese during exposure to water and to tailor the compatibility of the powder when used as a pigment in a chosen binder system. Stabilizers may also modify the processing and handling characteristics of the formed powders. Manganese/valence stabilizer combinations are chosen based on the well-founded principles of manganese coordination chemical. Many manganese-valence stabilizer combinations are presented that can equal the performance of conventional hexavalent chromium or tetravalent lead systems. It is emphasized that this abstract is provided to comply with the rules requiring an abstract which will allow a searcher or other reader to quickly ascertain the subject matter of the tech. disclosure. It is submitted with the understanding that it will not be used to interpret or limit the scope or meaning of the claims.

IT 10377-66-9, Manganese nitrate 13446-10-1,

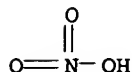
Ammonium permanganate 30744-82-2

RL: RCT (Reactant); RACT (Reactant or reagent)

(non-toxic corrosion-protection pigments based on manganese)

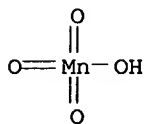
RN 10377-66-9 HCAPLUS

CN Nitric acid, manganese(2+) salt (8CI, 9CI) (CA INDEX NAME)



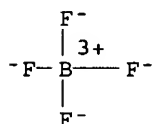
● 1/2 Mn(II)

RN 13446-10-1 HCAPLUS

CN Permanganic acid (HMnO₄), ammonium salt (8CI, 9CI) (CA INDEX NAME)● NH₃

RN 30744-82-2 HCAPLUS

CN Borate(1-), tetrafluoro-, manganese(2+) (2:1) (9CI) (CA INDEX NAME)



● 1/2 Mn(II) 2+

IC ICM C01G045-00

INCL 106401000; 423599000; 427327000; 427299000; 106479000; 106481000; 106499000; 106455000; 106436000; 106450000

CC 42-6 (Coatings, Inks, and Related Products)

IT Coating materials

(non-toxic corrosion-protection pigments based on manganese)

IT Acrylic polymers, uses

Alkyd resins

Asphalt

Chlorinated natural rubber

Epoxy resins, uses

Fluoropolymers, uses

Neoprene rubber, uses

Polyamides, uses

Polyesters, uses

- Polysiloxanes, uses
 Polyurethanes, uses
 Polyvinyl butyrals
 Styrene-butadiene rubber, uses
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
 (non-toxic corrosion-protection pigments based on manganese)
- IT Corrosion inhibitors
 (pigments; non-toxic corrosion-protection pigments based on manganese)
- IT 9010-98-4
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
 (neoprene rubber, non-toxic corrosion-protection pigments based on manganese)
- IT 9002-88-4, Polyethylene
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
 (non-toxic corrosion-protection pigments based on manganese)
- IT 1313-13-9, Manganese dioxide, reactions 1317-34-6, Manganese sesquioxide 1317-35-7, Manganomanganic oxide 2180-18-9, Manganese acetate 7722-64-7, Potassium permanganate 7773-01-5, Manganese chloride 7785-87-7, Manganese sulfate 7787-36-2, Barium permanganate 7790-33-2, Manganese iodide 10024-66-5, Manganese citrate 10101-50-5, Sodium permanganate 10118-76-0, Calcium permanganate 10124-54-6, Manganese phosphate 10377-62-5, Magnesium permanganate 10377-66-9, Manganese nitrate 11097-89-5, Manganese borate 11113-71-6, Manganese fluoride 11129-60-5, Manganese oxide 11129-61-6, Manganese silicate 12421-24-8, Aluminum manganese fluoride (AlMnF5) 12626-88-9, Manganese hydroxide 13446-03-2, Manganese bromide 13446-10-1, Ammonium permanganate 13453-79-7, Lithium permanganate 13770-16-6, Manganese perchlorate 14284-89-0, Manganese acetylacetonate 14446-13-0, Strontium permanganate 14998-36-8, Manganese tartrate 14998-38-0 15070-36-7 17375-29-0, Manganese benzoate 17375-37-0, Manganese carbonate 18820-29-6, Manganese sulfide 19664-95-0, Manganese butyrate 23414-72-4, Zinc permanganate 25327-03-1, Manganese thiocyanate 25808-75-7, Manganese fluosilicate 30744-82-2 30868-52-1 34109-78-9 50820-29-6, Manganese glycolate 51240-96-1 51877-53-3, Manganese lactate 52458-39-6, Manganese propionate 70268-41-6 76649-09-7, Aluminum permanganate 82022-29-5, Copper permanganate 89930-76-7 101229-81-6, Cobalt permanganate 104813-96-9, Manganese chlorate 110580-21-7, Manganese oxalate 141215-16-9 627895-23-2 648903-33-7 648903-34-8 648903-36-0 648903-38-2
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (non-toxic corrosion-protection pigments based on manganese)
- IT 56367-81-8 188623-20-3 648903-41-7
 RL: TEM (Technical or engineered material use); USES (Uses)
 (non-toxic corrosion-protection pigments based on manganese)
- IT 7439-96-5D, Manganese, complexes with valence stabilizers
 RL: TEM (Technical or engineered material use); USES (Uses)
 (pigment; non-toxic corrosion-protection pigments based on manganese)
- IT 9003-55-8
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
 (styrene-butadiene rubber, non-toxic corrosion-protection pigments based on manganese)

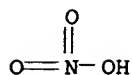
ACCESSION NUMBER: 2003:913046 HCAPLUS
 DOCUMENT NUMBER: 139:392437
 TITLE: Materials for degrading contaminants ✓
 INVENTOR(S): Okun, Nelya; Hill, Craig L.
 PATENT ASSIGNEE(S): Emory University, USA
 SOURCE: PCT Int. Appl., 34 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003094977	A2	20031120	WO 2003-US14375	2003 0505
WO 2003094977	A3	20040708		
W:			AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW	
RW:			GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG	
US 2005159307	A1	20050721	US 2003-512336	2003 0505
PRIORITY APPLN. INFO.:			US 2002-377740P	P 2002 0503
			WO 2003-US14375	W 2003 0505

AB Embodiments of the present invention includes **compns.**, materials including the **compns.**, methods of using the **compns.**, and methods of degrading **contaminants**. The **composition** can include a polyoxometalate/cationic silica material. In addition, the **compns.** can be made of a polyoxometalate/cationic silica material, a copper (II) salt having a **weakly bound anion**, and a nitrate salts. Further, the **compns.** can be made of a polyoxometalate/cationic silica material, a copper (II) salt having a **weakly bound anion**, a compound selected from tetraethylammonium (TEA) nitrate, tetra-n-butylammonium (TBA) nitrate, and **combinations** thereof.

IT 3251-23-8, Cupric nitrate 10141-05-6, Cobalt nitrate 10421-48-4, Ferric nitrate 13138-45-9, Nickel nitrate 13770-18-8, Cupric perchlorate 34946-82-2, Cupric triflate 38465-60-0, Cupric tetrafluoroborate
 RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
 (materials for degrading **contaminants**)

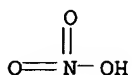
RN 3251-23-8 HCAPLUS
 CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

RN 10141-05-6 HCAPLUS

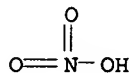
CN Nitric acid, cobalt(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Co(II)

RN 10421-48-4 HCAPLUS

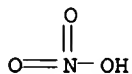
CN Nitric acid, iron(3+) salt (8CI, 9CI) (CA INDEX NAME)



●1/3 Fe(III)

RN 13138-45-9 HCAPLUS

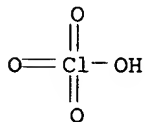
CN Nitric acid, nickel(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Ni(II)

RN 13770-18-8 HCAPLUS

CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)

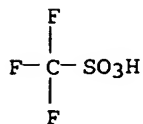


●1/2 Cu(II)

RN 34946-82-2 HCAPLUS

CN Methanesulfonic acid, trifluoro-, copper(2+) salt (9CI) (CA INDEX NAME)

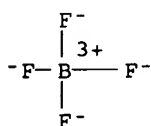
NAME)



●1/2 Cu(II)

RN 38465-60-0 HCAPLUS

CN Borate(1-), tetrafluoro-, copper(2+) (2:1) (9CI) (CA INDEX NAME)



●1/2 Cu(II) 2+

IC ICM A61L

CC 4-3 (Toxicology)

ST chem warfare agent decontamination;
oxometalate cationic silica chem warfare agent
decontamination; copper salt oxometalate cationic silica
chem warfare agent decontamination

IT Infection

(anthrax; materials for degrading contaminants)

IT Biological warfare agents

Chemical warfare agents

Decontamination

(materials for degrading contaminants)

IT Heteropoly acids

RL: NUU (Other use, unclassified); USES (Uses)

(materials for degrading contaminants)

IT Aldehydes, reactions

Halogen compounds

RL: RCT (Reactant); REM (Removal or disposal); PROC (Process);

RACT (Reactant or reagent)

(materials for degrading contaminants)

IT Nitrates, reactions

RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant
or reagent); USES (Uses)(transition metal; materials for degrading contaminants
)

IT 625455-59-6 625455-61-0 625830-47-9 625830-48-0

625830-49-1 625830-52-6

RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant
or reagent); USES (Uses)(cationic catalyst support; materials for degrading
contaminants)

IT 173358-70-8, Bindzil CAT

RL: NUU (Other use, unclassified); USES (Uses)

(materials for degrading contaminants)

IT 3251-23-8, Cupric nitrate 10141-05-6, Cobalt

nitrate 10421-48-4, Ferric nitrate 12200-88-3

- 13138-45-9, Nickel nitrate 13770-18-8, Cupric perchlorate 34946-82-2, Cupric triflate 38465-60-0, Cupric tetrafluoroborate 73131-99-4 625830-46-8 625830-51-5
 RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
 (materials for degrading contaminants)
- IT 59858-44-5P 134360-58-0P 194925-14-9P
 RL: NUU (Other use, unclassified); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (materials for degrading contaminants)
- IT 1941-26-0, Tetraethylammonium nitrate 1941-27-1, Tetrabutylammonium nitrate
 RL: NUU (Other use, unclassified); REM (Removal or disposal); PROC (Process); USES (Uses)
 (materials for degrading contaminants)
- IT 625830-54-8
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (materials for degrading contaminants)
- IT 50-00-0, Formaldehyde, reactions 74-93-1, Methyl mercaptan, reactions 75-07-0, Acetaldehyde, reactions 75-18-3, Dimethyl sulfide 75-44-5, Phosgene 75-50-3, Trimethylamine, reactions 79-09-4, Propionic acid, reactions 100-42-5, Styrene, reactions 107-44-8, Sarin 107-92-6, n-Butyric acid, reactions 109-52-4, n-Valeric acid, reactions 110-01-0, Tetrahydrothiophene 110-81-6, Diethyl disulfide 110-86-1, Pyridine, reactions 352-93-2, Diethyl sulfide 503-74-2, Isovaleric acid 624-92-0, Dimethyl disulfide 630-08-0, Carbon monoxide, reactions 693-07-2, 2-Chloroethyl ethyl sulfide 7440-38-2D, Arsenic, compds. 7664-41-7, Ammonia, reactions 7704-34-9D, Sulfur, compds. 7727-37-9D, Nitrogen, compds. 7783-06-4, Hydrogen sulfide, reactions
 RL: RCT (Reactant); REM (Removal or disposal); PROC (Process); RACT (Reactant or reagent)
 (materials for degrading contaminants)

L88 ANSWER 8 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:236094 HCAPLUS

DOCUMENT NUMBER: 139:89622

TITLE: Polyoxometalates on cationic silica Highly selective and efficient O₂/air-based oxidation of 2-chloroethyl ethyl sulfide at ambient temperature

AUTHOR(S): Okun, Nelya M.; Anderson, Travis M.; Hill, Craig L.

CORPORATE SOURCE: Department of Chemistry, Emory University, Atlanta, GA, 30322, USA

SOURCE: Journal of Molecular Catalysis A: Chemical (2003), 197(1-2), 283-290
 CODEN: JMCCF2; ISSN: 1381-1169

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Binary cupric nitrate and triflate systems catalyze the homogeneous air oxidation of the mustard (HD) simulant 2-chloroethyl Et sulfide (CEES) to the corresponding desired sulfoxide (CEESO) with effectively quant. selectivity in acetonitrile under ambient conditions. This activity is enhanced when cationic silica nanoparticles coated with the anionic multi-iron polyoxometalates (POMs) are also present. The POM-coated nanoparticles are prepared by treatment of aqueous suspensions of Bindzil CAT cationic silica nanoparticles (from Akzo Nobel) with aqueous solns. of the POMs, K₉[(FeIII(OH₂)₂)₃(PW₉O₃₄)₂] (K₉₄) or Na₁₂[(FeOH₂)₂Fe₂(P₂W₁₅O₅₆)₂] (Na₁₂₅).

IT 3251-23-8, Cupric nitrate 34946-82-2, Cupric

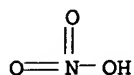
triflate

RL: CAT (Catalyst use); USES (Uses)

(polyoxometalates on cationic silica for highly selective and efficient aerobic oxidation of 2-chloroethyl Et sulfide at ambient temperature)

RN 3251-23-8 HCAPLUS

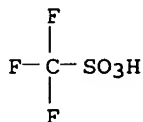
CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

RN 34946-82-2 HCAPLUS

CN Methanesulfonic acid, trifluoro-, copper(2+) salt (9CI) (CA INDEX NAME)



●1/2 Cu(II)

CC 60-4 (Waste Treatment and Disposal)

IT 3251-23-8, Cupric nitrate 34946-82-2, Cupric triflate

RL: CAT (Catalyst use); USES (Uses)

(polyoxometalates on cationic silica for highly selective and efficient aerobic oxidation of 2-chloroethyl Et sulfide at ambient temperature)

REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L88 ANSWER 9 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:42704 HCAPLUS

DOCUMENT NUMBER: 138:91678

TITLE: Wood preservative composition containing fungicidal and bactericidal metal compounds

INVENTOR(S): Las, Allan; Liu, Xianbin; Hoff, Ed

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 12 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 2003010956	A1	20030116	US 2001-880597	2001 0613

PRIORITY APPLN. INFO.:

US 2001-880597

2001
0613

OTHER SOURCE(S): MARPAT 138:91678

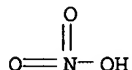
AB The present invention is directed to a wood preservative **composition** and a method of using the same. The wood preservative **composition** has an effective amount of a fungicidal and bactericidal metal compound, a triazole compound, and at least a first and/or a second quaternary ammonium compound. Alternatively, the wood preservative **composition** contains at least one addnl. agent, depending on the formulation. In one embodiment, the **composition** contains a mold inhibitor that is emulsified with the metal from the fungicidal and bactericidal metal compound in solution. In another embodiment, there is an effective amount of a boron compound. And in another embodiment, a combination of the boron compound and at least one amine compound.

IT 3251-23-8, Copper nitrate (Cu(NO3)2) 13770-18-8, Copper perchlorate (Cu(ClO4)2)
 RL: BUU (Biological use, unclassified); BIOL (Biological study);
 USES (Uses)

(wood preservative **composition** containing fungicidal and bactericidal metal compds.)

RN 3251-23-8 HCAPLUS

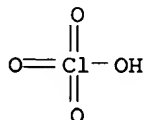
CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

RN 13770-18-8 HCAPLUS

CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

IC ICM C09K003-00

INCL 252380000

CC 43-1 (Cellulose, Lignin, Paper, and Other Wood Products)

Section cross-reference(s): 5

IT Antibacterial agents

Fungicides

Insecticides

Wood preservatives

(wood preservative **composition** containing fungicidal and bactericidal metal compds.)

IT Borates

Quaternary ammonium compounds, biological studies

RL: BUU (Biological use, unclassified); BIOL (Biological study);

USES (Uses)

(wood preservative **composition** containing fungicidal and

bactericidal metal compds.)

IT 288-88-0D, 1H-1,2,4-Triazole, compds. 1317-39-1, Cuprous oxide, biological studies 1333-22-8, Copper hydroxide sulfate (Cu₄(OH)₆(SO₄)) 3251-23-8, Copper nitrate (Cu(NO₃)₂) 7447-39-4, Copper chloride (CuCl₂), biological studies 7646-85-7, Zinc chloride (ZnCl₂), biological studies 7733-02-0, Zinc sulfate (ZnSO₄) 7758-98-7, Copper sulfate (CuSO₄), biological studies 7779-88-6, Zinc nitrate (Zn(NO₃)₂) 10043-35-3D, Boric acid, compds. 12027-98-4, Zinc hydroxide sulfate (Zn₄(OH)₆(SO₄)) 12069-69-1 12381-00-9, Zinc chloride hydroxide (Zn₂Cl(OH)₃) 13637-61-1, Zinc perchlorate (Zn(ClO₄)₂) 13770-18-8, Copper perchlorate (Cu(ClO₄)₂) 16872-11-0D, Fluoroboric acid, compds. 20427-58-1, Zinc hydroxide (Zn(OH)₂) 20427-59-2, Copper hydroxide (Cu(OH)₂) 60207-31-0, Azaconazole 60207-90-1, Propiconazole 79983-71-4, Hexaconazole 94361-06-5, Cyproconazole 107534-96-3, Tebuconazole 107893-14-1, Zinc oxide (Zn₂O) 119446-68-3, Difenconazole 160578-43-8, Zinc carbonate hydroxide (Zn₂(CO₃)(OH)₂) 484051-73-2, Copper chloride hydroxide (Cu₂Cl(OH))

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(wood preservative composition containing fungicidal and bactericidal metal compds.)

L88 ANSWER 10 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:816764 HCAPLUS

DOCUMENT NUMBER: 138:39603

TITLE: Addition Polymerization of Norbornene-Type Monomers. High Activity Cationic Allyl Palladium Catalysts

AUTHOR(S): Lipian, John; Mimna, Richard A.; Fondran, John C.; Yandulov, Dmitry; Shick, Robert A.; Goodall, Brian L.; Rhodes, Larry F.; Huffman, John C.

CORPORATE SOURCE: Promerus LLC, Brecksville, OH, 44141, USA

SOURCE: Macromolecules (2002), 35(24), 8969-8977

CODEN: MAMOBX; ISSN: 0024-9297

PUBLISHER: American Chemical Society

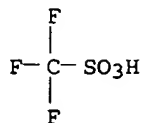
DOCUMENT TYPE: Journal

LANGUAGE: English

AB A family of high activity catalysts for the vinyl addition polymerization of norbornene-type monomers based on cationic η^3 -allylpalladium complexes coordinated by phosphine ligands has been discovered. The palladium complex [(η^3 -allyl)Pd(tricyclohexylphosphine)(ether)][B(3,5-(CF₃)₂C₆H₃)₄] was found to copolymerize 5-butylnorbornene and 5-triethoxysilylnorbornene (95:5 molar ratio) with truly high activity and is capable of producing more than a metric ton of copolymer per mol Pd per h. Multicomponent catalyst systems based on the addition of salts of weakly coordinating anions (e.g., Na[B(3,5-(CF₃)₂C₆H₃)₄] or Li[B(C₆F₅)₄]·2.5Et₂O) to (η^3 -allyl)Pd(X)(PR₃) (X = chloride, acetate, nitrate, trifluoroacetate, and triflate) in the presence of norbornene-type monomers were developed. NMR tube expts. confirm that Na[B(3,5-(CF₃)₂C₆H₃)₄] abstrs. the Cl ligand from the palladium complex forming the cationic complex in situ. Control expts. confirmed that a high activity polymerization system requires a palladium cation containing an allyl ligand, a neutral, two-electron-donor phosphine ligand, and a weakly coordinating counterion. Those complexes where X contained electron-withdrawing groups such as trifluoroacetate or triflate were the most active catalyst precursors. η^3 -Allylpalladium catalyst precursors with larger cone angle phosphine ligands yield lower mol. weight polymers. The poly(norbornene) mol. wts. can be further tuned by addition of α -olefin chain transfer agents to the reaction mixture. The catalyst systems were also found to polymerize norbornene-type monomers in aqueous media to high

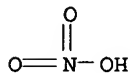
conversion at very low catalyst loadings. The effect of mol. weight on thermomech. properties was explored.

IT 2923-28-6, Silver triflate 7761-88-8, Silver nitrate, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (in preparation of allylpalladium catalyst for polymerization of norbornene derivs.)
 RN 2923-28-6 HCAPLUS
 CN Methanesulfonic acid, trifluoro-, silver(1+) salt (8CI, 9CI) (CA INDEX NAME)



● Ag(I)

RN 7761-88-8 HCAPLUS
 CN Nitric acid silver(1+) salt (8CI, 9CI) (CA INDEX NAME)



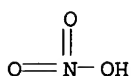
● Ag(I)

CC 35-3 (Chemistry of Synthetic High Polymers)
 Section cross-reference(s): 29
 IT 563-63-3, Silver acetate 2622-14-2, Tricyclohexyl phosphine
 2923-28-6, Silver triflate 2966-50-9, Silver trifluoroacetate 7761-88-8, Silver nitrate, reactions
 79230-20-9, Tetrakis(bis(3,5-trifluoromethyl)phenyl) borate
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (in preparation of allylpalladium catalyst for polymerization of norbornene derivs.)
 REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L88 ANSWER 11 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 2002:483798 HCAPLUS
 DOCUMENT NUMBER: 137:144007
 TITLE: Increasing the stability of silver(I) ions in inorganic-organic hybrid membranes for C₂H₄/C₂H₆ separation by using weakly self-coordinating anions of the silver salts
 AUTHOR(S): Su, C.; Kuraoka, K.; Yazawa, T.
 CORPORATE SOURCE: Special Division of Green Life Technology, Ecoglass Research Group, National Institute of Advanced Industrial Science and Technology (AIST), Ikeda City, Osaka, 563-8577, Japan
 SOURCE: Journal of Materials Science Letters (2002), 21(7), 525-527
 CODEN: JMSLD5; ISSN: 0261-8028
 PUBLISHER: Kluwer Academic Publishers

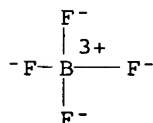
DOCUMENT TYPE: Journal
 LANGUAGE: English

- AB Previously we reported a novel inorg.-organic membrane which can sep. C₂H₄/C₂H₆ at relatively low humidity. Here, we emphasize the stability of silver(I) ions, which would coordinate with the poly(N-vinylpyrrolidone) (PVP), a matrix mediate agent in the SiO₂-PVP hybrid membranes. It was found that the properties of the anions of the silver salts had significant influence on the coordination between silver salt and PVP. Only when the coordination between silver(I) ion and PVP formed, would the membrane be stable in air and had a high selectivity to C₂H₄ at low humidity which was clarified at high separation temperature. The coordination between silver salt and PVP and the hydrogen bonds between amide carbonyl and PVP and silanol groups formed a stable network, which implied that the organic, inorg. components dispersed at a mol. level. The inorg.-organic hybrid membrane was prepared from TEOS-Pr triethoxysilane sol by sol-gel method. PVP and silver salts (AgNO₃, AgClO₄ or AgBF₄) were added. The solns. were dip-coated on alumina porous supports and heat treated. The interactions between silver salt and PVP, PVP and HO-Si.tplbond. in the membranes were studied using a FTIR spectrophotometer. The single-gas permeances of the membranes for N₂, He, C₂H₆ and C₂H₄ were measured at 423K. It is obvious that the anion nature of the silver salts affects the complexation abilities of different silver salts with PVP, which was significant to the separation performance of the membranes. The complexation between AgBF₄ and PVP decreased the possibility for Ag⁺ ions to be reduced to metallic silver in air, which was easy to occur in membranes containing AgNO₃ and AgClO₄. The reduction of silver salt in the membrane was a fatal problem to the separation of C₂H₄/C₂H₆.
- IT 7761-88-8, Nitric acid silver(1+) salt, processes
 14104-20-2, Silver fluoroborate AgBF₄
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
 (silver source; increasing the stability of Ag⁺ ions in inorg.-organic hybrid membranes for C₂H₄/C₂H₆ separation using weakly self-coordinating anions of Ag salts)
- RN 7761-88-8 HCAPLUS
- CN Nitric acid silver(1+) salt (8CI, 9CI) (CA INDEX NAME)



● Ag(I)

- RN 14104-20-2 HCAPLUS
- CN Borate(1-), tetrafluoro-, silver(1+) (8CI, 9CI) (CA INDEX NAME)



● Ag(I) +

CC 57-1 (Ceramics)
 Section cross-reference(s): 38, 47, 49

IT Permeability
 Sol-gel processing
 (increasing the stability of Ag⁺ ions in inorg.-organic hybrid membranes for C₂H₄/C₂H₆ separation using **weakly self-coordinating anions** of Ag salts)

IT Hybrid organic-inorganic materials
 (silica-PVP membranes; increasing the stability of Ag⁺ ions in inorg.-organic hybrid membranes for C₂H₄/C₂H₆ separation using **weakly self-coordinating anions** of Ag salts)

IT Membranes, nonbiological
 (silica-PVP; increasing the stability of Ag⁺ ions in inorg.-organic hybrid membranes for C₂H₄/C₂H₆ separation using **weakly self-coordinating anions** of Ag salts)

IT 9003-39-8, Poly(N-vinylpyrrolidone)
 RL: MOA (Modifier or additive use); USES (Uses)
 (matrix mediate agent; increasing the stability of Ag⁺ ions in inorg.-organic hybrid membranes for C₂H₄/C₂H₆ separation using **weakly self-coordinating anions** of Ag salts)

IT 292177-43-6P
 RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (membranes; increasing the stability of Ag⁺ ions in inorg.-organic hybrid membranes for C₂H₄/C₂H₆ separation using **weakly self-coordinating anions** of Ag salts)

IT 74-84-0, Ethane, processes 74-85-1, Ethene, processes
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)
 (permeating gas **mixture**; increasing the stability of Ag⁺ ions in inorg.-organic hybrid membranes for C₂H₄/C₂H₆ separation using **weakly self-coordinating anions** of Ag salts)

IT 7440-59-7, Helium, processes 7727-37-9, Nitrogen, processes
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)
 (permeating gas; increasing the stability of Ag⁺ ions in inorg.-organic hybrid membranes for C₂H₄/C₂H₆ separation using **weakly self-coordinating anions** of Ag salts)

IT 78-10-4, Teos 2550-02-9, Propyl triethoxysilane
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
 (precursor; increasing the stability of Ag⁺ ions in inorg.-organic hybrid membranes for C₂H₄/C₂H₆ separation using **weakly self-coordinating anions** of Ag salts)

IT 7761-88-8, Nitric acid silver(1+) salt, processes
 7783-93-9 14104-20-2, Silver fluoroborate AgBF₄
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
 (silver source; increasing the stability of Ag⁺ ions in inorg.-organic hybrid membranes for C₂H₄/C₂H₆ separation using **weakly self-coordinating anions** of Ag salts)

REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L88 ANSWER 12 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:237381 HCAPLUS

DOCUMENT NUMBER: 136:262987

TITLE: Process for the preparation of aryl ketones
 generating reduced amounts of **toxic**
 byproducts

INVENTOR(S): Walker, Martin

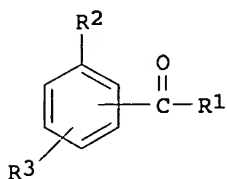
PATENT ASSIGNEE(S): College of the Holy Cross, USA

SOURCE: U.S., 8 pp.
 CODEN: USXXAM

DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6362375	B1	20020326	US 1999-454083	1999 1203
PRIORITY APPLN. INFO.:			US 1999-454083	1999 1203

OTHER SOURCE(S): CASREACT 136:262987; MARPAT 136:262987
 GI



AB An efficient, cost-effective method useful for the production of aryl ketones I [wherein R1 = carboxylic acid residue; R2 = H, OH, alkyl, alkoxy, aryl(oxy), or halo; R3 = H, OH, alkyl, alkoxy, aryl(oxy), halo, or any combination thereof; or R2R3 = divalent chain forming a fused ring with the benzene] that minimizes the generation of toxic byproducts is disclosed. The method uses a metal triflate salt, preferably a rare metal triflate, to catalyze the reaction between the carboxylic acid substrate and the aromatic substrate. The H2O generated by the reaction is collected and removed during the process. For example, praseodymium (III) trifluoromethanesulfonate, CF3SO3H, anisole, and p-toluic acid were refluxed together in toluene with azeotropic removal of the lower water layer for 22 h to afford 4-methoxy-4'-methylbenzophenone (60%).

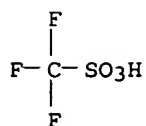
IT 52093-27-3, Praseodymium (III) trifluoromethanesulfonate
 52093-30-8 54761-04-5 76089-77-5,
 Cerium(III) trifluoromethanesulfonate 139177-62-1,
 Dysprosium (III) trifluoromethanesulfonate 144026-79-9
 161337-67-3

RL: CAT (Catalyst use); USES (Uses)

(catalyst; process for preparation of aryl ketones via modified Friedel-Crafts acylation catalyzed by rare metal triflates that generates reduced amts. of toxic byproducts)

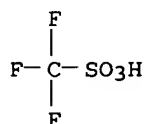
RN 52093-27-3 HCAPLUS

CN Methanesulfonic acid, trifluoro-, praseodymium(3+) salt (9CI) (CA INDEX NAME)



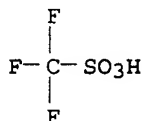
●1/3 Pr(III)

RN 52093-30-8 HCAPLUS

CN Methanesulfonic acid, trifluoro-, yttrium(3+) salt (9CI) (CA
INDEX NAME)

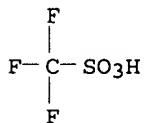
●1/3 Y(III)

RN 54761-04-5 HCAPLUS

CN Methanesulfonic acid, trifluoro-, ytterbium(3+) salt (9CI) (CA
INDEX NAME)

●1/3 Yb(III)

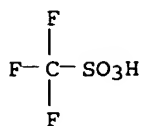
RN 76089-77-5 HCAPLUS

CN Methanesulfonic acid, trifluoro-, cerium(3+) salt (9CI) (CA INDEX
NAME)

●1/3 Ce(III)

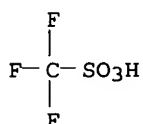
RN 139177-62-1 HCAPLUS

CN Methanesulfonic acid, trifluoro-, dysprosium(3+) salt (9CI) (CA
INDEX NAME)



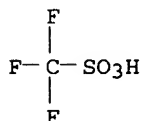
●1/3 Dy(III)

RN 144026-79-9 HCAPLUS

CN Methanesulfonic acid, trifluoro-, scandium(3+) salt (9CI) (CA
INDEX NAME)

●1/3 Sc(III)

RN 161337-67-3 HCAPLUS

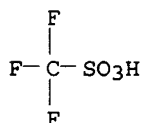
CN Methanesulfonic acid, trifluoro-, hafnium(4+) salt (9CI) (CA
INDEX NAME)

●1/4 Hf(IV)

IT 52093-26-2P, Lanthanum (III) Triflate

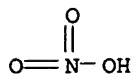
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP
(Preparation); USES (Uses)(catalyst; process for preparation of aryl ketones via modified
Friedel-Crafts acylation catalyzed by rare metal triflates that
generates reduced amts. of toxic byproducts)

RN 52093-26-2 HCAPLUS

CN Methanesulfonic acid, trifluoro-, lanthanum(3+) salt (9CI) (CA
INDEX NAME)

●1/3 La(III)

IT 13823-29-5, Thorium (IV) nitrate
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reactant; process for preparation of aryl ketones via modified
 Friedel-Crafts acylation catalyzed by rare metal triflates that
 generates reduced amts. of toxic byproducts)
 RN 13823-29-5 HCAPLUS
 CN Nitric acid, thorium(4+) salt (8CI, 9CI) (CA INDEX NAME)



● 1/4 Th(IV)

IC ICM C07C045-46
 INCL 568319000
 CC 25-16 (Benzene, Its Derivatives, and Condensed Benzenoid
 Compounds)
 ST aryl ketone prepn carboxylic acid Friedel Crafts acylation; rare
 metal triflate catalyst aryl ketone prepn; toxic
 byproduct redn aryl ketone prepn
 IT Friedel-Crafts reaction
 Green chemistry
 (process for preparation of aryl ketones via modified Friedel-Crafts
 acylation catalyzed by rare metal triflates that generates
 reduced amts. of toxic byproducts)
 IT Friedel-Crafts reaction catalysts
 (rare metal triflate; process for preparation of aryl ketones via
 modified Friedel-Crafts acylation catalyzed by rare metal
 triflates that generates reduced amts. of toxic
 byproducts)
 IT 52093-27-3, Praseodymium (III) trifluoromethanesulfonate
 52093-30-8 54761-04-5 76089-77-5,
 Cerium(III) trifluoromethanesulfonate 88189-03-1 128008-30-0
 139177-62-1, Dysprosium (III) trifluoromethanesulfonate
 144026-79-9 161337-67-3
 RL: CAT (Catalyst use); USES (Uses)
 (catalyst; process for preparation of aryl ketones via modified
 Friedel-Crafts acylation catalyzed by rare metal triflates that
 generates reduced amts. of toxic byproducts)
 IT 27607-68-7P 52093-26-2P, Lanthanum (III) Triflate
 RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP
 (Preparation); USES (Uses)
 (catalyst; process for preparation of aryl ketones via modified
 Friedel-Crafts acylation catalyzed by rare metal triflates that
 generates reduced amts. of toxic byproducts)
 IT 90-96-0P, 4,4'-Dimethoxybenzophenone 611-97-2P,
 4,4'-Dimethylbenzophenone 23886-71-7P, 4-Methoxy-4'-
 methylbenzophenone 84836-32-8P
 RL: IMF (Industrial manufacture); SPN (Synthetic preparation);
 PREP (Preparation)
 (process for preparation of aryl ketones via modified Friedel-Crafts
 acylation catalyzed by rare metal triflates that generates
 reduced amts. of toxic byproducts)
 IT 88-09-5, 2-Ethylbutanoic acid 99-94-5, p-Toluic acid 100-66-3,
 Anisole, reactions 108-88-3, Toluene, reactions 587-26-8
 1493-13-6, Trifluoromethanesulfonic acid 13823-29-5,
 Thorium (IV) nitrate
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reactant; process for preparation of aryl ketones via modified
 Friedel-Crafts acylation catalyzed by rare metal triflates that
 generates reduced amts. of toxic byproducts)

REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE
FOR THIS RECORD. ALL CITATIONS AVAILABLE
IN THE RE FORMAT

L88 ANSWER 13 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:107296 HCAPLUS
DOCUMENT NUMBER: 136:150996
TITLE: New processes for the production of
fexofenadine
INVENTOR(S): Milla, Federico Junquera
PATENT ASSIGNEE(S): Texcontor Etablissement, Liechtenstein
SOURCE: PCT Int. Appl., 29 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2002010115	A1	20020207	WO 2001-IB1294	2001 0719
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W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ,
CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ,
EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID,
IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,
LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT,
RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ,
UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD,
RU, TJ

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE,
CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
MR, NE, SN, TD, TG

EP 1307423	A1	20030507	EP 2001-947748	2001 0719
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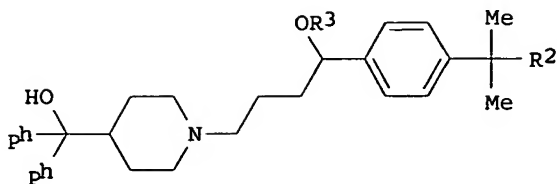
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US 2003166682	A1	20030904	US 2003-333974	2003 0319
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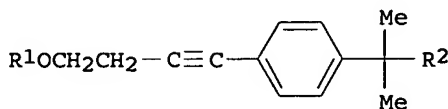
PRIORITY APPLN. INFO.: GB 2000-18691 A
2000
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WO 2001-IB1294 W
2001
0719

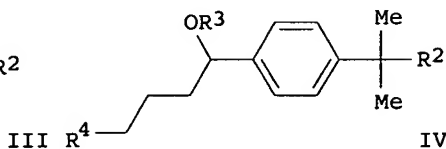
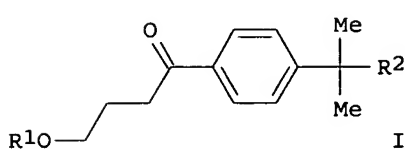
OTHER SOURCE(S): CASREACT 136:150996; MARPAT 136:150996
GI



I



II



IV

AB An improved process for the manufacture of fexofenadine is described, in which a compound of formula (I; wherein R2 represents CO₂H, CO₂-C₁-6 alkyl or cyano; and R3 represents hydrogen, mesylate, triflate, tosylate or carboxy-C₁-6-alkyl, or a salt thereof) is prepared by: (1) hydrating a compound of formula (II; wherein R1 represents hydrogen or carboxy-C₁-6-alkyl; and R2 is a hereinbefore defined), with a copper and/or silver compound in the presence of palladium or a compound thereof to yield a compound of formula (III; wherein R1 and R2 are as hereinbefore defined); (2) converting said compound of formula III into a compound of formula (IV; wherein R2 and R3 are as hereinbefore defined and R4 represents a halogen atom), and (3) reacting said compound of formula IV with azacyclonol. This process avoids the use of hazardous chems. and the need for laborious and time consuming regioisomer separation and gives fexofenadine in high yields and short reaction time. Thus, a solution of 4-(4-hydroxy-1-butyryl)- α,α -dimethylbenzeneacetic acid Me ester in aqueous methanol was treated with copper tetrafluoroborate and refluxed for 12 h to give Me 4-(4-hydroxy-1-oxobutyl)- α,α -dimethylphenylacetate (V). A CH₂Cl₂ solution of V was stirred with 48% aqueous HBr solution for 2 h to give Me 4-(4-bromo-1-oxobutyl)- α,α -dimethylphenylacetate (VI). A THF solution of VI was added dropwise to a cooled (-10°) solution of NaBH₄ in MeOH while maintaining the temperature at <5° to give, after 2 h, Me 4-(4-bromo-1-hydroxybutyl)- α,α -dimethylphenylacetate which was acetylated by acetyl chloride in the presence of 4-dimethylaminopyridine in pyridine at 0° for 1 h 40 min to give Me 4-(1-acetoxy-4-bromobutyl)- α,α -dimethylphenylacetate (VII). Crude VII, azacyclonol, KHCO₃, and NaI were heated at reflux in butanone for 3 h to give Me 4-[4-[4-(hydroxydiphenylmethyl)-1-piperidinyl]-1-acetoxybutyl]- α,α -dimethylphenylacetate which was heated at reflux with 10 M NaOH, water, and MeOH for 3.5 h and acidified to pH 5 with AcOH to give 4-[4-[4-(hydroxydiphenylmethyl)-1-piperidinyl]-1-hydroxybutyl]- α,α -dimethylphenylacetic acid (fexofenadine).

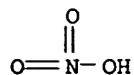
IT 3251-23-8 38465-60-0, Copper tetrafluoroborate

RL: CAT (Catalyst use); USES (Uses)

(processes for production of fexofenadine via hydration of p-(hydroxybutynyl)- α,α -dimethylbenzeneacetic acid Me ester, followed by bromination, acetylation, and amination with azacyclonol)

RN 3251-23-8 HCAPLUS

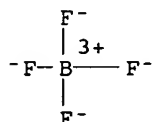
CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

RN 38465-60-0 HCAPLUS

CN Borate(1-), tetrafluoro-, copper(2+) (2:1) (9CI) (CA INDEX NAME)



●1/2 Cu(II) 2+

IC ICM C07C069-738

ICS C07C067-313; C07D211-22; A61K031-445; A61P037-08

CC 25-16 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)

Section cross-reference(s): 1

IT 2923-28-6, Silver trifluoromethanesulfonate 3251-23-8
7440-50-8D, Copper, Nafion exchanged with 7447-39-4, Copper
chloride, uses 7758-98-7, Copper sulfate, uses 7761-88-8,
Silver nitrate, uses 13965-03-2, Bistriphenylphosphine palladium
dichloride 14104-20-2, Silver fluoroborate 14220-64-5,
Bis(benzonitrile) palladium dichloride 14221-01-3,
Tetrakis(triphenylphosphine)palladium(0) 26042-63-7, Silver
hexafluorophosphate 38465-60-0, Copper tetrafluoroborate
42152-44-3, Copper trifluoromethanesulfonate

RL: CAT (Catalyst use); USES (Uses)

(processes for production of fexofenadine via hydration of
p-(hydroxybutynyl)- α,α -dimethylbenzeneacetic acid
Me ester, followed by bromination, acetylation, and amination
with azacyclonol)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE
FOR THIS RECORD. ALL CITATIONS AVAILABLE
IN THE RE FORMAT

L88 ANSWER 14 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:890533 HCAPLUS

DOCUMENT NUMBER: 136:118934

TITLE: Wide-Angle X-ray Scattering Studies on the
Structural Properties of Polymer Electrolytes
Containing Silver Ions

AUTHOR(S): Choi, Sangwook; Kim, Jong Hak; Kang, Yong Soo
CORPORATE SOURCE: Center for Facilitated Transport Membranes,
Korea Institute of Science Technology, Seoul,
130-650, S. Korea

SOURCE: Macromolecules (2001), 34(26), 9087-9092

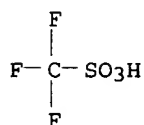
CODEN: MAMOBX; ISSN: 0024-9297

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

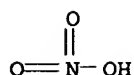
LANGUAGE: English

- AB Wide-angle X-ray scattering (WAXS) has been used to study the structural properties of polymer electrolytes containing silver ions. The WAXS spectra of pure poly(2-ethyl-2-oxazoline) (POZ) and poly(vinylpyrrolidone) (PVP) showed two broad amorphous peaks. The first of these peaks was assigned to the interchain distance, and the second peak was assigned to the distance between the pendant groups of the polymer chains. When silver salts such as AgBF₄, AgCF₃SO₃, or AgClO₄ were introduced into the polymer matrixes, their silver ions coordinated with the carbonyl oxygens on the pendant groups to form polymer/silver salt complexes. In the case of the PVP/silver salt complexes, the first peak shifted to lower angle and became narrower with increasing silver concentration, indicative of an increase in the interchain distance and ordering. In contrast, the position of the second peak remained almost constant. For the POZ/silver salt complexes, however, the positions of both peaks shifted to higher scattering angle with increasing silver concentration until the mole ratio of carbonyl oxygen to silver reached about 3:1. Further increase of the concentration caused the first peak to shift to lower angle while the second peak remained almost constant, which is similar to the behavior of the PVP/Ag salt complexes. The difference in the behavior of the PVP/Ag and POZ/Ag salt complexes may arise from different strengths of the transient cross-links formed by silver cations with the pendant groups of POZ and PVP. The Bragg d spacing results calculated from the second peak indicate that the silver ions coordinate more strongly with the pendant groups in the POZ/AgClO₄ complex than in the POZ/AgCF₃SO₃ and POZ/AgBF₄ complexes. It is worth noting that the Bragg d spacings for the POZ/silver and PVP/silver salt complexes were very different at low silver concns. but approach almost the same value at high silver concns. (e.g., at a mole ratio of [C=O]:[Ag] = 1:1). These findings are consistent with our previous results on facilitated olefin transport and glass transition temperature behavior in silver polymer electrolyte membranes. We therefore conclude that the facilitated olefin transport and glass transition temperature behavior in polymer electrolytes are strongly related to the structural change that occurs upon coordination of silver cations with the carbonyl oxygens of the polymeric chains.
- IT 2923-28-6, Silver triflate 7761-88-8, Silver nitrate, uses 14104-20-2, Silver tetrafluoroborate
 RL: MOA (Modifier or additive use); USES (Uses)
 (polyethyloxazoline, polyvinylpyrrolidone complexes; structural studies of polymer electrolytes containing silver ions)
- RN 2923-28-6 HCAPLUS
- CN Methanesulfonic acid, trifluoro-, silver(1+) salt (8CI, 9CI) (CA INDEX NAME)



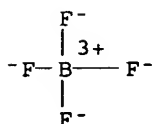
● Ag(I)

- RN 7761-88-8 HCAPLUS
- CN Nitric acid silver(1+) salt (8CI, 9CI) (CA INDEX NAME)



● Ag(I)

RN 14104-20-2 HCAPLUS
 CN Borate(1-), tetrafluoro-, silver(1+) (8CI, 9CI) (CA INDEX NAME)



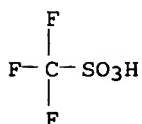
● Ag(I) +

CC 36-2 (Physical Properties of Synthetic High Polymers)
 Section cross-reference(s): 73
 IT Permeation
 (of mixed gases on polymer electrolytes containing silver ions)
 IT 2923-28-6, Silver triflate 7761-88-8, Silver
 nitrate, uses 7783-93-9, Silver perchlorate 14104-20-2
 , Silver tetrafluoroborate
 RL: MOA (Modifier or additive use); USES (Uses)
 (polyethyloxazoline, polyvinylpyrrolidone complexes; structural
 studies of polymer electrolytes containing silver ions)
 REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE
 FOR THIS RECORD. ALL CITATIONS AVAILABLE
 IN THE RE FORMAT

L88 ANSWER 15 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 2001:614734 HCAPLUS
 DOCUMENT NUMBER: 135:323121
 TITLE: Formation of Silver Nanoparticles Induced by
 Poly(2,6-dimethyl-1,4-phenylene oxide)
 AUTHOR(S): Kim, Hoon Sik; Ryu, Jae Hee; Jose, Binoy; Lee,
 Byung Gwon; Ahn, Byoung Sung; Kang, Yong Soo
 CORPORATE SOURCE: CFC Alternatives Research Center and Center
 for Facilitated Transport Membrane, Korea
 Institute of Science and Technology,
 Seongbukgu, Seoul, 136-791, S. Korea
 SOURCE: Langmuir (2001), 17(19), 5817-5820
 CODEN: LANGD5; ISSN: 0743-7463
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Colloidal Ag nanoparticles were easily obtained by reacting AgX (X
 = BF₄, PF₆, SbF₆, SO₃CF₃, ClO₄, NO₃) with poly(2,6-dimethyl-1,4-
 phenylene oxide) (PPO) in a mixed solvent system of
 CHCl₃ and MeOH in the absence of UV irradiation. Rapid formation of
 colloidal Ag nanoparticles was also observed when a Ag salt was added
 to a CHCl₃ solution containing PPO and 1-hexene. UV-visible spectra and
 transmission electron micrographs show that the colloidal Ag
 particles formed from these methods are nanosized, stable, and
 uniformly distributed. PPO is oxidized in the presence of a Ag

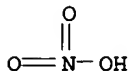
salt to give quinone and quinone derivs. which were analyzed by GC-Mass. A plausible mechanism for the formation of Ag nanoparticles is proposed from the redox reaction of PPO in the presence of a Ag salt.

IT 2923-28-6 7761-88-8, Silver nitrate (AgNO₃),
processes 14104-20-2, Silver fluoroborate (AgBF₄)
RL: PEP (Physical, engineering or chemical process); RCT
(Reactant); PROC (Process); RACT (Reactant or reagent)
(formation of silver nanoparticles obtained by reacting
poly(dimethylphenylene oxide) with)
RN 2923-28-6 HCAPLUS
CN Methanesulfonic acid, trifluoro-, silver(1+) salt (8CI, 9CI) (CA
INDEX NAME)



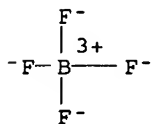
● Ag(I)

RN 7761-88-8 HCAPLUS
CN Nitric acid silver(1+) salt (8CI, 9CI) (CA INDEX NAME)



● Ag(I)

RN 14104-20-2 HCAPLUS
CN Borate(1-), tetrafluoro-, silver(1+) (8CI, 9CI) (CA INDEX NAME)



● Ag(I) +

CC 66-4 (Surface Chemistry and Colloids)
Section cross-reference(s): 22, 78
IT IR spectra
(mid-IR; of pure polydimethylphenylene oxide (PPO)
and PPO-AgBF₄ films prepared from PPO-AgBF₄ solution containing hexene)
IT 2923-28-6 7761-88-8, Silver nitrate (AgNO₃),
processes 7783-93-9, Silver perchlorate (AgClO₄)
14104-20-2, Silver fluoroborate (AgBF₄) 26042-63-7,
Silver hexafluorophosphate (AgPF₆) 26042-64-8, Silver
hexafluoroantimonate (AgSbF₆)
RL: PEP (Physical, engineering or chemical process); RCT

(Reactant); PROC (Process); RACT (Reactant or reagent)
(formation of silver nanoparticles obtained by reacting
poly(dimethylphenylene oxide) with)

REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE
FOR THIS RECORD. ALL CITATIONS AVAILABLE
IN THE RE FORMAT

L88 ANSWER 16 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:754402 HCAPLUS

DOCUMENT NUMBER: 133:339515

TITLE: Metal ligand containing bleaching
compositions

INVENTOR(S): Collins, Terrence J.; Horwitz, Colin P.

PATENT ASSIGNEE(S): Carnegie Mellon University, USA

SOURCE: U.S., 29 pp., Cont.-in-part of U.S. 5,853,428.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

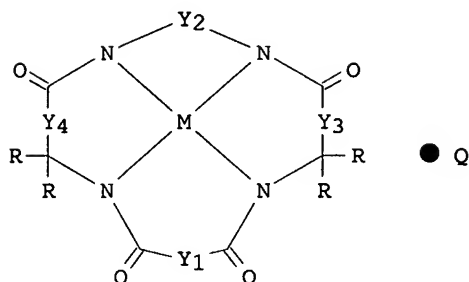
FAMILY ACC. NUM. COUNT: 5

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6136223	A	20001024	US 1998-75598	1998 0511
US 5876625	A	19990302	US 1996-684670	1996 0722
US 5853428	A	19981229	US 1997-804776	1997 0224
CA 2332134	AA	19991118	CA 1999-2332134	1999 0510
CA 2332134	C	20050920		
WO 9958634	A1	19991118	WO 1999-US10157	1999 0510
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9939778	A1	19991129	AU 1999-39778	1999 0510
AU 763682	B2	20030731		
BR 9910409	A	20010109	BR 1999-10409	1999 0510
EP 1078033	A1	20010228	EP 1999-922881	1999 0510
EP 1078033	B1	20050727		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002514693	T2	20020521	JP 2000-548427	1999 0510
NZ 507826	A	20030829	NZ 1999-507826	

				1999 0510
RU 2234528	C2	20040820	RU 2000-128026	
				1999 0510
AT 300599	E	20050815	AT 1999-922881	
				1999 0510
US 6241779	B1	20010605	US 2000-564419	
				2000 0504
NO 2000005505	A	20010109	NO 2000-5505	
				2000 1101
PRIORITY APPLN. INFO.:			US 1996-684670	A2 1996 0722
			US 1997-804776	A2 1997 0224
			US 1998-75598	A 1998 0511
			WO 1999-US10157	W 1999 0510

OTHER SOURCE(S): MARPAT 133:339515
GI

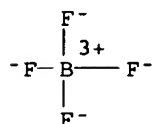


I

AB The invention provides a novel **composition** and method for removing or reducing levels of recalcitrant constituents from an effluent, such as lignin chromophores, absorbable or adsorbable organic halogens (AOX species), such as chlorinated phenols, dioxins, dibenzofurans, biphenyls, and high mol. weight material produced in the pulp and paper **bleaching** operations which includes using a **composition** comprised of (a) an amount of a source of an oxidant effective for oxidizing and thereby reducing the levels of such constituents and (b) an oxidatively stable oxidant activator having the structure I wherein Y1, Y3 and Y4 each represent a bridging group having zero, one, two or three carbon containing nodes for substitution, and Y2 is a bridging group having at least one carbon containing node for substitution, each said node containing a C(R), C(R1)(R2), or a C(R)2 unit and each R substituent is the same or different from the remaining R substituents; M is a transition metal with oxidation states of I, II, III, IV, V, VI, VII or VIII or selected from Groups 3, 4, 5, 6, 7, 8, 9, 10 and 11 of

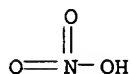
the Periodic Table of the Elements; and Q is any counterion which would balance the charge of the compound on a stoichiometric basis.

IT 14104-20-2, Silver tetrafluoroborate 15078-94-1,
Ammonium cerium nitrate
RL: RCT (Reactant); RACT (Reactant or reagent)
(metal ligand containing **bleaching compns.** and
application to pulp and paper wastewater treatment)
RN 14104-20-2 HCAPLUS
CN Borate(1-), tetrafluoro-, silver(1+) (8CI, 9CI) (CA INDEX NAME)



● Ag(I) +

RN 15078-94-1 HCAPLUS
CN Nitric acid, ammonium cerium salt (8CI, 9CI) (CA INDEX NAME)



●x Ce(x)

●x NH₃

IC ICM C01B015-00
ICS C01B015-055; C11D003-39
INCL 252186330
CC 60-2 (Waste Treatment and Disposal)
Section cross-reference(s): 41, 43
ST **bleaching compn** metal ligand paper manuf;
wastewater paper manuf **bleaching**
IT Wastewater treatment
(decolorization; metal ligand containing **bleaching compns.** and application to pulp and paper wastewater treatment)
IT Macrocyclic compounds
Macrocyclic compounds
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)
(ligands, tetraamido metal ligand complexes; as **bleaching compns.** and application to pulp and paper wastewater treatment)
IT Ligands
Ligands
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)
(macrocyclic, tetraamido metal ligand complexes; as

- bleaching compns. and application to pulp and paper wastewater treatment)
- IT Cellulose pulp
Paper
(metal ligand containing **bleaching compns.** and application to pulp and paper wastewater treatment)
- IT Chlorides, processes
RL: PEP (Physical, engineering or chemical process); REM (Removal or disposal); PROC (Process)
(organic; metal ligand containing **bleaching compns.** and application to pulp and paper wastewater treatment)
- IT Wastewater treatment
(oxidation; metal ligand containing **bleaching compns.** and application to pulp and paper wastewater treatment)
- IT Chromophores
(removal from pulp and paper wastewater; metal ligand containing **bleaching compns.** and application to pulp and paper wastewater treatment)
- IT Macrocyclic compounds
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)
(tetraamido metal ligand complexes; as **bleaching compns.** and application to pulp and paper wastewater treatment)
- IT 2001-45-8P, Tetraphenylphosphonium chloride 136668-03-6P
136668-04-7P 136668-05-8P 202401-72-7P 202401-74-9P
202401-76-1P 202401-77-2P 202401-79-4P 202401-80-7P
250670-72-5P 303765-47-1P 303765-48-2P
RL: IMF (Industrial manufacture); PREP (Preparation)
(metal ligand containing **bleaching compns.** and application to pulp and paper wastewater treatment)
- IT 202401-89-6P 303174-62-1P
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); RCT (Reactant); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)
(metal ligand containing **bleaching compns.** and application to pulp and paper wastewater treatment)
- IT 303765-49-3P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(metal ligand containing **bleaching compns.** and application to pulp and paper wastewater treatment)
- IT 22042-96-2, Dequest 2066
RL: NUU (Other use, unclassified); USES (Uses)
(metal ligand containing **bleaching compns.** and application to pulp and paper wastewater treatment)
- IT 95-54-5, 1,2-Diaminobenzene, reactions 143-33-9, Sodium cyanide
479-27-6, 1,8-Naphthalenediamine 594-19-4, tert-Butyllithium
2756-85-6, 1-Amino-1-cyclohexane carboxylic acid 3171-45-7,
1,2-Diamino-4,5-dimethylbenzene 5348-42-5, 1,2-Diamino-4,5-dichlorobenzene 5659-93-8, Dimethyl malonyl dichloride
14104-20-2, Silver tetrafluoroborate 15078-94-1,
Ammonium cerium nitrate 27841-33-4, 1,2-Diamino-4,5-dimethoxybenzene 202401-85-2 202401-87-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(metal ligand containing **bleaching compns.** and application to pulp and paper wastewater treatment)
- IT 88-06-2, 2,4,6-Trichlorophenol
RL: REM (Removal or disposal); PROC (Process)
(metal ligand containing **bleaching compns.** and application to pulp and paper wastewater treatment)
- IT 7722-84-1, Hydrogen peroxide, reactions
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(oxidizing agent; metal ligand containing **bleaching**

comps. and application to pulp and paper wastewater treatment)

IT 62-57-7, α -Methyl alanine
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with diethyl-, and dimethylmalonyl dichloride; metal ligand containing **bleaching comps.** and application to pulp and paper wastewater treatment)

IT 54505-72-5, Diethyl malonyl dichloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with α -methylalanine; metal ligand containing **bleaching comps.** and application to pulp and paper wastewater treatment)

IT 2768-90-3, Pinacyanol chloride
RL: PEP (Physical, engineering or chemical process); REM (Removal or disposal); PROC (Process)
(removal from pulp/paper wastewater; metal ligand containing **bleaching comps.** and application to pulp and paper wastewater treatment)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L88 ANSWER 17 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:740958 HCAPLUS
DOCUMENT NUMBER: 133:277509
TITLE: Stable aqueous antimicrobial compositions containing 3-isothiazolone
INVENTOR(S): El A'mma, Beverly Jean
PATENT ASSIGNEE(S): Rohm and Haas Company, USA
SOURCE: Eur. Pat. Appl., 12 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
EP 1044609	A1	20001018	EP 2000-302826	2000 0404
EP 1044609	B1	20021120		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
CN 1270763	A	20001025	CN 2000-106553	2000 0412
US 6211213	B1	20010403	US 2000-547407	2000 0412
JP 2000327506	A2	20001128	JP 2000-113502	2000 0414
BR 2000001621	A	20010403	BR 2000-1621	2000 0414
PRIORITY APPLN. INFO.:		US 1999-129813P	P	1999 0416

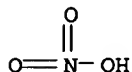
AB Aqueous antimicrobial **comps.** containing a 3-isothiazolone compound are stabilized with organic oxidants and copper salts.

IT 3251-23-8 13770-18-8, Copper(2+) perchlorate
RL: MOA (Modifier or additive use); USES (Uses)

(cupric ion source as stabilizer in aqueous antimicrobial
compns. containing 3-isothiazolone)

RN 3251-23-8 HCAPLUS

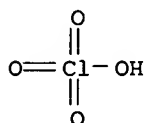
CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

RN 13770-18-8 HCAPLUS

CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

IC ICM A01N043-80

ICS A01N025-22

CC 5-2 (Agrochemical Bioregulators)

IT Antimicrobial agents

Pesticide formulations

(stable aqueous antimicrobial compns. containing
3-isothiazolone)

IT 3251-23-8 7447-39-4, Copper(2+) chloride, uses
7758-98-7, Copper sulfate, uses 7789-45-9, Copper (II) bromide
13770-18-8, Copper(2+) perchlorate 14984-71-5
26506-47-8, Copper chlorate

RL: MOA (Modifier or additive use); USES (Uses)

(cupric ion source as stabilizer in aqueous antimicrobial
compns. containing 3-isothiazolone)

IT 65-85-0, Benzoic acid, uses 75-91-2, tert-Butyl hydroperoxide
79-21-0, Peracetic acid 94-36-0, Benzoylperoxide, uses
107-71-1, tert-Butyl peroxyacetate 110-05-4 123-23-9, Succinic
acid peroxide 124-43-6 614-45-9, tert-Butyl peroxybenzoate
937-14-4, 3-Chloroperoxybenzoic acid 1203-40-3, Peroxyphthalic
acid 1338-23-4, 2-Butanone peroxide 3025-88-5,
2,5-Dihydroperoxy-2,5-dimethylhexane 5457-66-9, tert-Butyl
octanoate

RL: MOA (Modifier or additive use); USES (Uses)

(organic oxidant as stabilizer in aqueous antimicrobial compns
. containing 3-isothiazolone)

IT 1003-07-2D, 3-Isothiazolone, derivs 2682-20-4,
2-Methyl-3-Isothiazolone 2682-21-5, 2-Ethyl-3-Isothiazolone
26172-55-4 26542-23-4, 4,5-DiChloro-2-methyl-3-Isothiazolone
33344-74-0, 5-Chloro-2-ethyl-3-Isothiazolone 55965-84-9

RL: BUU (Biological use, unclassified); BIOL (Biological study);
USES (Uses)

(stable aqueous antimicrobial compns. containing)

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE
FOR THIS RECORD. ALL CITATIONS AVAILABLE
IN THE RE FORMAT

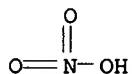
L88 ANSWER 18 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 1999:779125 HCAPLUS
 DOCUMENT NUMBER: 132:15648
 TITLE: **Composition** and method for reducing
 diarrhea in poultry and swine
 INVENTOR(S): Brinton, Gene; Mourning, Jackie Brinton
 PATENT ASSIGNEE(S): Brinton Veterinary Supply, Inc., USA
 SOURCE: U.S., 8 pp.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
US 5997911	A	19991207	US 1996-703638	1996 0827
PRIORITY APPLN. INFO.: US 1996-703638				1996 0827

AB A **composition** and method for reducing the incidence of Poulteritis Mortality Syndrome in young turkeys, flushing in mature turkeys, and scours in swine. The **composition** of the present invention comprises, in combination, a simple copper (II) salt, a hydroxycarboxylic acid, and a buffering agent solubilized within the drinking water of turkeys and/or swine in an antidiarrheal effective dosage as preventative maintenance in avoiding the diarrheal conditions associated with PEMS, flushing, and scours. In a preferred embodiment, the simple copper (II) salt comprises copper sulfate pentahydrate, the hydroxycarboxylic acid comprises anhydrous citric acid, and the buffering agent comprises ammonium carbonate.

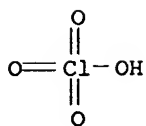
IT 3251-23-8, Cupric nitrate 13770-18-8, Cupric perchlorate 34946-82-2, Cupric trifluoromethanesulfonate 38465-60-0, Cupric tetrafluoroborate
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (copper salt **compns.** for reducing diarrhea in poultry and swine)

RN 3251-23-8 HCAPLUS
 CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

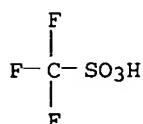
RN 13770-18-8 HCAPLUS
 CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

RN 34946-82-2 HCAPLUS

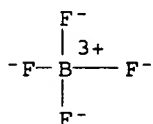
CN Methanesulfonic acid, trifluoro-, copper(2+) salt (9CI) (CA INDEX NAME)



●1/2 Cu(II)

RN 38465-60-0 HCAPLUS

CN Borate(1-), tetrafluoro-, copper(2+) (2:1) (9CI) (CA INDEX NAME)



●1/2 Cu(II) 2+

IC ICM A61K031-30

ICS A61K031-28; A61K031-19; A61K033-34

INCL 424632000

CC 63-6 (Pharmaceuticals)

IT Antidiarrheals

Poultry

Swine

(copper salt **compns.** for reducing diarrhea in poultry and swine)

IT Carboxylic acids, biological studies

RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(hydroxy; copper salt **compns.** for reducing diarrhea in poultry and swine)

IT Drugs

(veterinary; copper salt **compns.** for reducing diarrhea in poultry and swine)

IT 506-87-6, Ammonium carbonate

RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(buffer; copper salt **compns.** for reducing diarrhea in poultry and swine)

IT 50-21-5, Lactic acid, biological studies 50-81-7, L-Ascorbic acid, biological studies 77-92-9, biological studies 87-69-4, Tartaric acid, biological studies 526-95-4, Gluconic acid 3562-74-1, Homocitric acid
 RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (copper salt **compns.** for reducing diarrhea in poultry and swine)

IT 142-71-2, Cupric acetate 527-09-3, Cupric gluconate 815-82-7, Cupric tartrate, biological studies 866-82-0, Cupric citrate 1184-54-9, Cupric methoxide 1184-64-1, Cupric carbonate 3251-23-8, Cupric nitrate 7440-50-8D, Copper, salts, biological studies 7758-99-8, Cupric sulfate pentahydrate 11112-08-6, Cupric diisopropyl salicylate 12771-00-5, Copper tungsten oxide 13395-16-9, Cupric acetylacetonate 13767-34-5, Cupric molybdate 13770-18-8, Cupric perchlorate 15192-76-4, Cupric thiocyanate 16039-52-4, Cupric lactate 18911-01-8, Copper glycolate 34946-82-2, Cupric trifluoromethanesulfonate 38465-60-0, Cupric tetrafluoroborate 819869-34-6
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (copper salt **compns.** for reducing diarrhea in poultry and swine)

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L88 ANSWER 19 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:279680 HCAPLUS

DOCUMENT NUMBER: 130:292815

TITLE: Stable isothiazolone derivative microbicide formulation

INVENTOR(S): Mattox, John Robert

PATENT ASSIGNEE(S): Rohm and Haas Company, USA

SOURCE: Eur. Pat. Appl., 8 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 910952	A1	19990428	EP 1998-201682	1998 0520
EP 910952	B1	20021030		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 5955486	A	19990921	US 1998-23447	1998 0213
AU 9864890	A1	19990520	AU 1998-64890	1998 0512
ES 2186090	T3	20030501	ES 1998-201682	1998 0520
TW 381962	B	20000211	TW 1998-87108142	1998 0526
BR 9801714	A	20000425	BR 1998-1714	1998 0527
CN 1215556	A	19990505	CN 1998-109796	

CN 1106150
JP 11158014

B
A2

20030423
19990615

JP 1998-215044

1998
0611

1998
0730

PRIORITY APPLN. INFO.:

US 1997-63351P

P

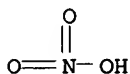
1997
1028

AB Stable microbicidal compns. containing a 3-isothiazolone compound, chlorate or perchlorate salts, copper salts and water are disclosed. In the presence of small amts. of Cu²⁺, chlorate or perchlorate salts stabilize the 3-isothiazolone derivative and inhibit precipitation. Applications include cooling towers, boilers, wastewater treatment, mineral slurries, paints, metal-working fluids, etc.

IT 3251-23-8, Copper(II) nitrate 13770-18-8, Copper(II) perchlorate
RL: MOA (Modifier or additive use); USES (Uses)
(stabilizers in isothiazolone derivative microbicide formulations)

RN 3251-23-8 HCAPLUS

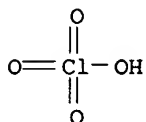
CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Cu(II)

RN 13770-18-8 HCAPLUS

CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Cu(II)

IC ICM A01N043-80
ICS A01N025-22

ICI A01N043-80, A01N059-20, A01N059-00

CC 5-2 (Agrochemical Bioregulators)

IT 142-71-2, Copper(II) acetate 3251-23-8, Copper(II) nitrate 3811-04-9, Potassium chlorate 7447-39-4, Copper(II) chloride, uses 7601-89-0, Sodium perchlorate 7758-98-7, Copper(II) sulfate, uses 7775-09-9, Sodium chlorate 7778-74-7, Potassium perchlorate 7789-45-9, Copper(II) bromide 13770-18-8, Copper(II) perchlorate 14721-21-2 14984-71-5 15158-11-9D, Copper(II), salts, uses
RL: MOA (Modifier or additive use); USES (Uses)
(stabilizers in isothiazolone derivative microbicide formulations)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

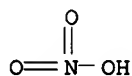
L88 ANSWER 20 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:210877 HCAPLUS
 DOCUMENT NUMBER: 130:343577
 TITLE: Conductance and thermodynamic study of the interaction of some transition and heavy metals with phenyl-aza-15-crown-5 (PhA15C5) in different binary acetonitrile-water solvent mixtures
 AUTHOR(S): Marji, Deeb; Fraihat, Safwan
 CORPORATE SOURCE: Chemistry Department, Yarmouk University, Irbid, Jordan
 SOURCE: Journal of Inclusion Phenomena and Macrocyclic Chemistry (1999), 33(1), 99-108
 CODEN: JIPCF5
 PUBLISHER: Kluwer Academic Publishers
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB The molar conductance of solns. containing $\text{Fe}(\text{ClO}_4)_3$, $\text{Cu}(\text{ClO}_4)_2$, $\text{Fe}(\text{NO}_3)_3$, $\text{Cu}(\text{NO}_3)_2$, $\text{Hg}(\text{NO}_3)_2$ and $\text{Cd}(\text{NO}_3)_2$ salts as function of the phenyl-aza-15-crown-5 concentration was measured in different acetonitrile-water mixts. at various temps.; the salt-PhA15C5 complex formation consts. were determined. The stability of the nitrate salts decreases in the order $\text{Hg}^{2+} > \text{Cu}^{2+} > \text{Fe}^{3+} > \text{Cd}^{2+}$ and the formation consts. decrease as the percentage of acetonitrile decreases in the mixture. The counter anion also affects the stability of the complexes; the metal perchlorate-crown complexes are more stable than those of the metal nitrate salts. The enthalpy and entropy of the complexation were calculated and were found to be sensitive to solvent composition

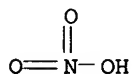
IT 3251-23-8 10421-48-4 13770-18-8
 RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
 (conductance and thermodyn. study of complexation between transition or heavy metal salts and phenyl-aza-15-crown-5 in aqueous acetonitrile solns.)

RN 3251-23-8 HCAPLUS
 CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



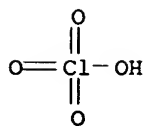
●1/2 Cu(II)

RN 10421-48-4 HCAPLUS
 CN Nitric acid, iron(3+) salt (8CI, 9CI) (CA INDEX NAME)



●1/3 Fe(III)

RN 13770-18-8 HCAPLUS
 CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Cu(II)

CC 68-3 (Phase Equilibriums, Chemical Equilibriums, and Solutions)
Section cross-reference(s): 29, 78

IT 3251-23-8 10045-94-0, Mercuric nitrate 10325-94-7
10421-48-4 13537-24-1, Ferric perchlorate
13770-18-8 14302-87-5, Hg²⁺, processes 14797-55-8,
Nitrate, processes 14797-73-0, Perchlorate 15158-11-9, Cu²⁺,
processes 20074-52-6, Fe³⁺, processes 22537-48-0, Cd²⁺,
processes 66750-10-5

RL: PEP (Physical, engineering or chemical process); RCT
(Reactant); PROC (Process); RACT (Reactant or reagent)
(conductance and thermodyn. study of complexation between
transition or heavy metal salts and phenyl-aza-15-crown-5 in
aqueous acetonitrile solns.)

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE
FOR THIS RECORD. ALL CITATIONS AVAILABLE
IN THE RE FORMAT

L88 ANSWER 21 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:195552 HCAPLUS

DOCUMENT NUMBER: 130:213353

TITLE: Copper speciation in aqueous solutions of
fulvic acid and related molecular weight
distributions

AUTHOR(S): Wolf, M.; Teichmann, G.; Hoque, E.; Szymczak,
W.; Schimmack, W.

CORPORATE SOURCE: Institute Hydrology, GSF-National Research
Center Environment Health, Neuherberg,
D-85764, Germany

SOURCE: Fresenius' Journal of Analytical Chemistry
(1999), 363(5-6), 596-599
CODEN: FJACES; ISSN: 0937-0633

PUBLISHER: Springer-Verlag

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Potentiometric and fluorescence measurements of aqueous solns. of
fulvic acid containing Cu(NO₃)₂ or Cu(ClO₄)₂, resp., were carried out
at 25° and pH 5.5 to determine naturally occurring Cu species.
The fulvic acid used was isolated by XAD-8 from filtrated (0.3
µm) water of a peat bog in the Dachauer Moos near Munich. From
the results an operational mol. weight of fulvic acid of ≈750
g/mol was estimated, which was confirmed by mol. weight distributions
determined by high-performance size-exclusion chromatog. (HPSEC), gel
permeation chromatog. (GPC), and time-of-flight SIMS. Using this
mol. weight and assuming that mainly 1:1 Cu-fulvic acid complexes are
formed, a conditional stability constant of the Cu-fulvic acid
complex of 105.9 could be calculated. These data are essential for the
assessment of organic carrier-mediated migration of Cu as well as of
the toxicol. risk potential of Cu in aqueous environment and
can be used as input parameters for geochem. modeling of the Cu
species distribution in aqueous solns.

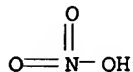
IT 3251-23-8, Cupric nitrate 13770-18-8, Cupric
perchlorate

RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)
(copper speciation in aqueous solns. of fulvic acid containing Cu(NO₃)₂)

or Cu(ClO₄)₂ and related mol. weight distributions for
toxicol. risk assessment in bog waters)

RN 3251-23-8 HCAPLUS

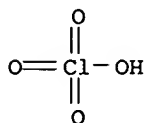
CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

RN 13770-18-8 HCAPLUS

CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

CC 61-3 (Water)

Section cross-reference(s): 79

IT Wetland waters

(bog; copper speciation in aqueous solns. of fulvic acid containing
Cu(NO₃)₂ or Cu(ClO₄)₂ and related mol. weight distributions for
toxicol. risk assessment in)

IT Molecular weight distribution

(copper speciation in aqueous solns. of fulvic acid containing Cu(NO₃)₂
or Cu(ClO₄)₂ and related mol. weight distributions for
toxicol. risk assessment in bog waters)

IT Fulvic acids

RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)
(copper speciation in aqueous solns. of fulvic acid containing Cu(NO₃)₂
or Cu(ClO₄)₂ and related mol. weight distributions for
toxicol. risk assessment in bog waters)

IT 7732-18-5, Water, analysis

RL: AMX (Analytical matrix); ANST (Analytical study)
(copper speciation in aqueous solns. of fulvic acid containing Cu(NO₃)₂
or Cu(ClO₄)₂ and related mol. weight distributions for
toxicol. risk assessment in bog waters)

IT 7440-50-8D, Copper, fulvic acid complex, analysis

RL: ANT (Analyte); FMU (Formation, unclassified); ANST (Analytical
study); FORM (Formation, nonpreparative)
(copper speciation in aqueous solns. of fulvic acid containing Cu(NO₃)₂
or Cu(ClO₄)₂ and related mol. weight distributions for
toxicol. risk assessment in bog waters)

IT 3251-23-8, Cupric nitrate 13770-18-8, Cupric
perchlorate

RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)
(copper speciation in aqueous solns. of fulvic acid containing Cu(NO₃)₂
or Cu(ClO₄)₂ and related mol. weight distributions for
toxicol. risk assessment in bog waters)

REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE
FOR THIS RECORD. ALL CITATIONS AVAILABLE
IN THE RE FORMAT

L88 ANSWER 22 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:282908 HCAPLUS

DOCUMENT NUMBER: 129:9202

TITLE: Real Ionic Solutions in the Mean Spherical Approximation. 3. Osmotic and Activity Coefficients for Associating Electrolytes in the Primitive Model

AUTHOR(S): Simonin, Jean-Pierre; Bernard, Olivier; Blum, Lesser

CORPORATE SOURCE: Laboratoire Liquides Ioniques et Interfaces Chargees (LI2C-URA CNRS 430), Universite Paris VI, Paris, 75252, Fr.

SOURCE: Journal of Physical Chemistry B (1998), 102(22), 4411-4417

CODEN: JPCBFK; ISSN: 1089-5647

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Osmotic and activity coeffs. for aqueous solns. of pure associating electrolytes are described by a MSA-like theory that includes the following effects: association (ion pairing or chemical) and solvation. The association of ions of opposite charges is described using the BIMSA, based on the Wertheim formalism. As for nonassocg. electrolytes, the hydration is taken into account by introducing a cation size and permittivity that are allowed to vary with concentration. New expressions for the osmotic and activity coefficient are given that account for this variation. These equations have been applied to fit data for a variety of aqueous solns. of pure salts at 25°. About 80 new salts have been treated, including perchlorates, nitrates, hydroxides, and sulfates. For some solns., good fits could be obtained up to very high concns., such as 25 mol kg⁻¹ for ammonium nitrate and 34 mol kg⁻¹ for potassium nitrite. Solns. of NaOH and nitric acid could be described to 10 mol kg⁻¹. A description for sulfuric acid has been obtained at low concentration (below 0.1 mol kg⁻¹). Another description has been made for high concns. (between 6 and 28 mol kg⁻¹) by using a chemical plausible model. In most cases the association constant is of the same order of magnitude as the literature value when available.

IT 3251-23-8 13138-45-9, Nickel nitrate

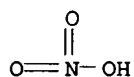
13770-18-8, Copper(II) perchlorate

RL: PRP (Properties)

(mean spherical approximation study of osmotic and activity coeffs. for associating electrolytes in primitive model)

RN 3251-23-8 HCAPLUS

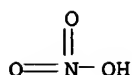
CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

RN 13138-45-9 HCAPLUS

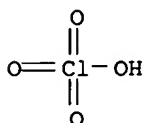
CN Nitric acid, nickel(2+) salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Ni(II)

RN 13770-18-8 HCAPLUS

CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Cu(II)

CC 68-6 (Phase Equilibriums, Chemical Equilibriums, and Solutions)
 IT 56-34-8, Tetraethylammonium chloride 64-20-0, Tetramethylammonium bromide 68-05-3, Tetraethylammonium iodide 71-91-0, Tetraethylammonium bromide 75-57-0, Tetramethylammonium chloride 75-58-1, Tetramethylammonium iodide 127-08-2, Potassium acetate 127-09-3, Sodium acetate 137-40-6, Sodium propionate 141-53-7, Sodium formate 333-20-0, Potassium thiocyanate 540-72-7, Sodium thiocyanate 546-89-4, Lithium acetate 631-40-3, Tetrapropylammonium iodide 1310-58-3, Potassium hydroxide, properties 1310-65-2, Lithium hydroxide 1310-73-2, Sodium hydroxide, properties 1314-64-3, Uranyl sulfate 1941-30-6, Tetrapropylammonium bromide 3251-23-8 5810-42-4, Tetrapropylammonium chloride 6484-52-2, Ammonium nitrate, properties 7447-39-4, Copper(II) chloride, properties 7487-88-9, Magnesium sulfate, properties 7601-90-3, Perchloric acid, properties 7631-99-4, Sodium nitrate, properties 7632-00-0, Sodium nitrite 7646-85-7, Zinc(II) chloride, properties 7647-17-8, Cesium chloride, properties 7664-93-9, Sulfuric acid, properties 7697-37-2, Nitric acid, properties 7718-54-9, Nickel chloride, properties 7733-02-0, Zinc sulfate 7757-79-1, Potassium nitrate, properties 7757-82-6, Sodium sulfate, properties 7758-09-0, Potassium nitrite 7758-98-7, Copper(II) sulfate, properties 7761-88-8, Silver nitrate, properties 7778-18-9, Calcium sulfate 7778-80-5, Potassium sulfate, properties 7779-88-6, Zinc(II) nitrate 7783-20-2, Ammonium sulfate, properties 7785-87-7, Manganese(II) sulfate 7786-81-4, Nickel sulfate 7787-69-1, Cesium bromide 7789-17-5, Cesium iodide 7789-18-6, Cesium nitrate 7789-39-1, Rubidium bromide 7790-29-6, Rubidium iodide 7790-86-5, Cerium chloride 7790-98-9 7791-11-9, Rubidium chloride, properties 7791-26-6, Uranyl chloride 10022-31-8, Barium nitrate 10025-76-0, Europium chloride 10026-08-1, Thorium chloride 10042-76-9, Strontium nitrate 10099-58-8, Lanthanum chloride 10099-59-9, Lanthanum nitrate 10099-66-8, Lutetium trichloride 10102-06-4, Uranyl nitrate 10124-36-4, Cadmium sulfate 10124-37-5, Calcium nitrate 10377-48-7, Lithium sulfate 10377-60-3, Magnesium nitrate 12124-97-9, Ammonium bromide 12125-02-9, Ammonium chloride, properties 13126-12-0, Rubidium nitrate 13138-45-9, Nickel nitrate 13510-49-1, Beryllium sulfate 13568-33-7, Lithium nitrite 13637-61-1, Zinc(II) perchlorate 13637-71-3, Nickel perchlorate 13770-18-8, Copper(II)

perchlorate 13823-29-5, Thorium(IV) nitrate 14017-46-0,
Lanthanum perchlorate 17194-00-2, Barium hydroxide

RL: PRP (Properties)

(mean spherical approximation study of osmotic and activity coeffs.
for associating electrolytes in primitive model)

REFERENCE COUNT: 43 THERE ARE 43 CITED REFERENCES AVAILABLE
FOR THIS RECORD. ALL CITATIONS AVAILABLE
IN THE RE FORMAT

L88 ANSWER 23 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:124027 HCAPLUS

DOCUMENT NUMBER: 128:221627

TITLE: Enhancement of antimicrobial peptide activity
by metal ions

INVENTOR(S): Lawyer, Carl H.; Watabe, Kounosuke

PATENT ASSIGNEE(S): Southern Illinois University, USA

SOURCE: PCT Int. Appl., 29 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 9806419	A1	19980219	WO 1997-US14399	1997 0815
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W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU,
CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK,
MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK,
SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM

RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES,
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CA 2263164	AA	19980219	CA 1997-2263164	1997 0815
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AU 9740699	A1	19980306	AU 1997-40699	1997 0815
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AU 725954	B2	20001026		
EP 920327	A1	19990609	EP 1997-938344	1997 0815

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE,
MC, PT, IE, FI

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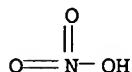
PRIORITY APPLN. INFO.: US 1996-23983P P
1996
0815

WO 1997-US14399 W
1997
0815

AB Provided are methods for maintaining or enhancing the
antimicrobial activity of antimicrobial peptides, lytic peptides,
and peptide-derived antibiotics by the use of metal ions. Also
provided are pharmaceutical and other compns. comprising
such peptides and/or at least one metal ion. Also provided are

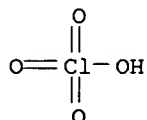
therapeutic and other methods for controlling the growth of undesirable or pathogenic microorganisms in various loci or milieu in, on, or outside the body employing these peptides and metal ions. Also provided are kits comprising containers containing a peptide and a metal ion(s), resp.

IT 3251-23-8, Cupric nitrate 13770-18-8, Cupric perchlorate
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (enhancement of antimicrobial peptide activity by metal ions)
 RN 3251-23-8 HCAPLUS
 CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

RN 13770-18-8 HCAPLUS
 CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

IC ICM A61K038-17
 CC 63-6 (Pharmaceuticals)
 Section cross-reference(s): 1
 IT 71-00-1D, Histidine, copper chelate 142-71-2, Cupric acetate 527-09-3, Copper gluconate 540-16-9, Cupric butyrate 544-19-4, Cupric formate 598-54-9, Cuprous acetate 624-88-4, Cuprous formate 660-60-6, Cupric stearate 814-91-5, Cupric oxalate 815-82-7, Cupric tartrate 866-82-0, Cupric citrate 1120-44-1, Cupric oleate 1184-64-1, Cupric carbonate 1303-92-0, Cupric borate 1308-09-4, Cupric chromate 1317-38-0, Cupric oxide, biological studies 1317-39-1, Cuprous oxide, biological studies 1317-40-4, Cupric sulfide 3251-23-8, Cupric nitrate 3251-29-4, Cuprous nitrate 3444-14-2 3687-47-6 7447-39-4, Cupric chloride, biological studies 7681-65-4, Cuprous iodide 7758-89-6, Cuprous chloride 7758-98-7, Cupric sulfate, biological studies 7787-70-4, Cuprous bromide 7789-45-9, Cupric bromide 7798-23-4, Cupric phosphate 10103-48-7, Copper phosphate 10402-29-6, Copper nitrate 11113-59-0, Copper fluoride 12125-21-2, Cuprous hydroxide 13097-41-1 13479-54-4, Cupric glycinate 13770-18-8, Cupric perchlorate 14701-21-4, Silver ion, biological studies 14721-21-2, Cupric chlorate 15061-57-1, Cuprous perchlorate 15123-69-0, Cupric selenate 15158-11-9, biological studies 15488-81-0 15599-88-9 15721-63-8, Copper, ion (Cu3+), biological studies 16048-96-7, Cupric salicylate 16397-91-4, Manganese ion (Mn2+), biological studies 17493-86-6, Copper, ion (Cu1+), biological studies 20427-59-2, Cupric hydroxide 20563-00-2, Cuprous stearate 20681-14-5, biological studies 22205-45-4, Cuprous sulfide 22537-21-9, Boron ion (B3+),

biological studies 22537-23-1, Aluminum ion, biological studies
 24203-36-9, Potassium ion, biological studies 37231-28-0,
 Melittin 41707-84-0, Cuprous salicylate 44042-21-9, Cuprous
 phosphate 50671-60-8, Cuprous butyrate 51827-01-1, Xenopsin
 53421-36-6 54453-03-1 55068-79-6, Bombinin 57131-61-0
 80802-79-5, Cecropin 103220-14-0, Defensin 113041-69-3,
 Magainin 114281-19-5, Levitide 116229-36-8, Bactenecin
 119938-54-4, Sapecin 120668-29-3, Cryptdin 125543-62-6
 134201-21-1 146345-75-7 148045-87-8, Tachyplesin
 163663-18-1, Protegrin 172972-39-3, Copper borate oxide
 (Cu₆(BO₂)₄) 179264-81-4 204143-82-8, Azurcidin

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (enhancement of antimicrobial peptide activity by metal ions)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE
 FOR THIS RECORD. ALL CITATIONS AVAILABLE
 IN THE RE FORMAT

L88 ANSWER 24 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1995:277206 HCAPLUS

DOCUMENT NUMBER: 122:37851

TITLE: Process for removal of bases from waste gases
 or air.

INVENTOR(S): Shimada, Takashi; Okumura, Toshio; Hatakeyama,
 Toshiya

PATENT ASSIGNEE(S): Japan Pionics Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 10 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

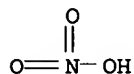
PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
EP 624392	A1	19941117	EP 1994-106928	1994 0504
EP 624392 R: DE, FR, GB	B1	19980812		
JP 06319938	A2	19941122	JP 1993-132719	1993 0511
JP 06319939	A2	19941122	JP 1993-132720	1993 0511
US 5662872	A	19970902	US 1995-560171	1995 1117
PRIORITY APPLN. INFO.:			JP 1993-132719	A 1993 0511
			JP 1993-132720	A 1993 0511
			US 1994-236343	B1 1994 0502

AB There is disclosed a process for cleaning a harmful gas
 which comprises bringing a gas containing a basic gas as a harmful
 component such as ammonia and amines into contact with a
 cleaning agent comprising a cupric salt supported on an
 inorg. carrier composed of an metallic oxide such as silica and

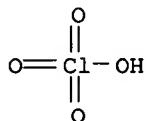
alumina or a metallic oxide mixture of cupric oxide and manganese dioxide to remove the harmful component from the gas containing a basic gas. According to the above process, it is made possible to effectively remove a basic gas such as ammonia and trimethylamine contained in the exhaust gas from semiconductor production process; and a harmful basic gas contained in dilution gas such as air or nitrogen which dils. the harmful gas suddenly leaked in emergency from a gas bomb filled inside with the harmful gas. Moreover, the process enables to prevent the occurrence of fire even in the coexistence of other gas such as silane, while maintaining excellent effect on the removal of the harmful gas.

IT 3251-23-8, Cupric nitrate 13770-18-8, Cupric perchlorate
 RL: NUU (Other use, unclassified); USES (Uses)
 (process for removal of bases from waste gases or air using cupric salts)
 RN 3251-23-8 HCAPLUS
 CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

RN 13770-18-8 HCAPLUS
 CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

IC ICM B01D053-34
 ICS B01D053-36; B01J020-06
 CC 59-4 (Air Pollution and Industrial Hygiene)
 IT 1313-13-9, Manganese dioxide, uses 1314-23-4, Zirconia, uses 1317-38-0, Cupric oxide, uses 1344-28-1, Alumina, uses 3251-23-8, Cupric nitrate 7631-86-9, Silica, uses 7758-98-7, Cupric sulfate, uses 7798-23-4, Cupric phosphate 7803-62-5, Silane, uses 13463-67-7, Titania, uses 13770-18-8, Cupric perchlorate 14721-21-2, Cupric chlorate 20255-20-3 36386-77-3, Cupric carbonate 39290-85-2, Cupric borate 55072-58-7, Silicic acid, copper(2+) salt 122202-26-0, Hypochlorous acid, copper(2+) salt
 RL: NUU (Other use, unclassified); USES (Uses)
 (process for removal of bases from waste gases or air using cupric salts)

L88 ANSWER 25 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 1995:249698 HCAPLUS
 DOCUMENT NUMBER: 122:303983
 TITLE: Electrochemical formation of initial composition for superconductor synthesis in system Bi-Pb-Sr-Ca-Cu-O. I. A

search for electrolytes for electrodeposition of Bi-Pb-Sr-Ca-Cu and Bi-Pb-Cu alloys

AUTHOR(S): Mochadskii, A. M.; Jankauskiene, R.-D. P.; Sharkis, A. A.; Juktonis, S. E.; Vengalis, B.

CORPORATE SOURCE: Institute Chemistry, Vilnius, 2006, Lithuania

SOURCE: Sverkhprovodimost: Fizika, Khimiya, Tekhnika (1993), 6(9-10), 1896-902

CODEN: SFKTE6; ISSN: 0131-5366

PUBLISHER: Institut Atomnoi Energii im. I. V. Kurchatova

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB An electrolyte **composition** is worked out for deposition of basic initial components used for high temperature superconductor synthesis in the Bi-Pb-Sr-Ca-Cu-O system with the atomic ratio of Bi:Pb:Cu = 1.8:0.2:3.

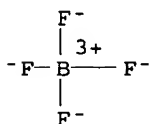
IT 38465-60-0, Copper fluoroborate (Cu(BF₄)₂)

RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)

(electrolyte; Bi Ca Cu Pb Sr oxide superconductors from alloy electrodeposition)

RN 38465-60-0 HCAPLUS

CN Borate(1-), tetrafluoro-, copper(2+) (2:1) (9CI) (CA INDEX NAME)



●1/2 Cu(II) 2+

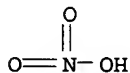
IT 3251-23-8, Cupric nitrate

RL: PRP (Properties)

(potentiometric curves of Pt electrode polarization in electrolyte solns.)

RN 3251-23-8 HCAPLUS

CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

CC 76-4 (Electric Phenomena)

Section cross-reference(s): 57, 72

IT 13814-96-5, Lead fluoroborate (Pb(BF₄)₂) 38465-60-0, Copper fluoroborate (Cu(BF₄)₂) 65991-46-0, Bismuth fluoroborate (Bi(BF₄)₃)

RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)

(electrolyte; Bi Ca Cu Pb Sr oxide superconductors from alloy electrodeposition)

IT 3251-23-8, Cupric nitrate 10042-76-9, Strontium nitrate

10099-74-8, Lead dinitrate 10124-37-5, Calcium nitrate

10361-44-1, Bismuth nitrate

RL: PRP (Properties)

(potentiometric curves of Pt electrode polarization in electrolyte solns.)

L88 ANSWER 26 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1994:323557 HCAPLUS

DOCUMENT NUMBER: 120:323557

TITLE: Preparation of 2-(disubstituted methylene)-1,3-dithioles as liver disease treating agents

INVENTOR(S): Shibuya, Isao; Yonemoto, Katsumi; Yasumoto, Masahiko; Taguchi, Yoichi; Tsucha, Tooru; Mizuno, Masaki

PATENT ASSIGNEE(S): Kogyo Gijutsuin, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

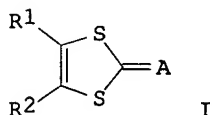
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 05310730	A2	19931122	JP 1992-113962	1992 0407
JP 06084369	B4	19941026		
PRIORITY APPLN. INFO.:			JP 1992-113962	1992 0407

OTHER SOURCE(S): CASREACT 120:323557; MARPAT 120:323557
GI



AB The title compds. I (A = CR₃R₄; R₁, R₂ = H, inert substituent; R₃, R₄ = electron-withdrawing group; R₁R₂ may be combined to form a ring), useful for liver disease treating agents (no data), are prepared by treating I (A = S) with CH₂R₃R₄ in the presence of Ag salts and bases. A mixture of I (A = S, R₁ = R₂ = Ph) and Ag trifluoroacetate in MeCN was treated with MeO₂CCH₂CN and Et₃N in hot bath for 2 h to give 58% I (A = C(CN)CO₂Me).

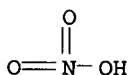
IT 7761-88-8, Silver nitrate, uses

RL: USES (Uses)

(in substitution of dithiolthiones with methylene compds.)

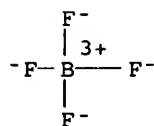
RN 7761-88-8 HCAPLUS

CN Nitric acid silver(1+) salt (8CI, 9CI) (CA INDEX NAME)



● Ag(I)

IT 14104-20-2, Silver tetrafluoroborate
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (in substitution of dithiolthiones with methylene compds.)
 RN 14104-20-2 HCAPLUS
 CN Borate(1-), tetrafluoro-, silver(1+) (8CI, 9CI) (CA INDEX NAME)

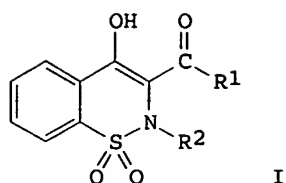


● Ag(I) +

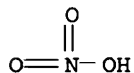
IC ICM C07D339-06
 ICS B01J027-12; B01J027-25; B01J031-02; B01J031-04
 ICA C07B061-00
 CC 28-5 (Heterocyclic Compounds (More Than One Hetero Atom))
 Section cross-reference(s): 1
 IT 7761-88-8, Silver nitrate, uses
 RL: USES (Uses)
 (in substitution of dithiolthiones with methylene compds.)
 IT 51-92-3 2966-50-9, Silver trifluoroacetate 14104-20-2,
 Silver tetrafluoroborate
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (in substitution of dithiolthiones with methylene compds.)

L88 ANSWER 27 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 1993:603424 HCAPLUS
 DOCUMENT NUMBER: 119:203424
 TITLE: Method of preparing complexes of copper(II)
 with 1,2-benzothiazines, useful as
 antiinflammatories
 INVENTOR(S): Mrozinski, Jerzy; Zborucki, Zygmunt; Janik,
 Maria; Wajcht, Jozef; Mozolowski, Felicjan
 PATENT ASSIGNEE(S): Jeleniogorskie Zaklady Farmaceutyczne "Polfa",
 Pol.; Uniwersytet Wroclawski
 SOURCE: Pol., 6 pp.
 CODEN: POXXA7
 DOCUMENT TYPE: Patent
 LANGUAGE: Polish
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PL 155110	B1	19911031	PL 1987-268015	1987 1001
PRIORITY APPLN. INFO.:				PL 1987-268015 1987 1001
OTHER SOURCE(S): MARPAT 119:203424				
GI				

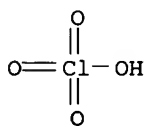


- AB Complexes of Cu(II) with various oxicams I [R1 = OMe, OEt, 2-pyridylamino (Q), 5-methyl-3-isoxazolylamino; R2 = Me, Et] were prepared by reaction of 2 equiv I with 1 equiv Cu(II) salt in H2O and/or an organic solvent. For example, piroxicam in H2O was dissolved by treatment with 2% NaOH, and excess NaOH was neutralized with aqueous HCl (to pH 8). Aqueous CuCl2 was added, and the resulting precipitate was centrifuged and dried to give 80% Cu·2I·2H2O (R1 = Q, R2 = Me) (II). II showed antiinflammatory and analgesic activity in rats (no data), showed lower toxicity than piroxicam, and was nearly devoid of ulcerogenic effects. Six addnl. examples are described.
- IT 3251-23-8, Cupric nitrate 13770-18-8, Cupric perchlorate
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (complexation of, with oxicam antiinflammatories)
- RN 3251-23-8 HCAPLUS
- CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Cu(II)

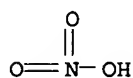
- RN 13770-18-8 HCAPLUS
- CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Cu(II)

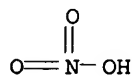
- IC ICM C07D279-02
 ICS C07D417-12
- CC 28-14 (Heterocyclic Compounds (More Than One Hetero Atom))
 Section cross-reference(s): 1, 78
- IT Toxicity
 (of copper complexes of oxicam antiinflammatories)
- IT 142-71-2, Cupric acetate 3251-23-8, Cupric nitrate
 7447-39-4, Cupric chloride, reactions 7758-98-7, Cupric sulfate,
 reactions 13770-18-8, Cupric perchlorate
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (complexation of, with oxicam antiinflammatories)

L88 ANSWER 28 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 1992:462350 HCAPLUS
 DOCUMENT NUMBER: 117:62350
 TITLE: Inhibition of HIV-1 proteinase by metal ions
 AUTHOR(S): Woon, T. C.; Brinkworth, R. I.; Fairlie, D. P.
 CORPORATE SOURCE: Cent. Drug Des. Dev., Univ. Queensland, 4072,
 Australia
 SOURCE: International Journal of Biochemistry (1992),
 24(6), 911-14
 CODEN: IJBOBV; ISSN: 0020-711X
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Certain metal ions have been identified as inhibitors (IC50 1-20
 µM) of the aspartic proteinase of human immunodeficiency virus
 type 1 (HIV-PR). By contrast most simple metal ions do not
 inhibit this enzyme. Those that did inhibit have in common a high
 charge/size ratio or "hard" acidic nature, preferring to combine
 covalently with oxygen donor ligands. Some evidence from
 independent X-ray crystal structure detns. suggests that the
 metalloinhibitors identified here may bind in the active site of
 the enzyme via coordination to the carboxylate side chains of the
 essential active site residues Asp 25 and 125. Although the
 measured inhibition is only µM, very few enzyme-inhibitor
 interactions can be taking place and so more complex
 metalloinhibitors with ligands that can also bind to peptide side
 chains of the enzyme might be significantly more potent inhibitors
 of HIV-PR and of viral replication.
 IT 10141-05-6 10421-48-4 13770-18-8
 RL: BAC (Biological activity or effector, except adverse); BSU
 (Biological study, unclassified); THU (Therapeutic use); BIOL
 (Biological study); USES (Uses)
 (antiviral activity of, human immunodeficiency virus type 1
 aspartic proteinase inhibition and electronic configuration in
 relation to)
 RN 10141-05-6 HCAPLUS
 CN Nitric acid, cobalt(2+) salt (8CI, 9CI) (CA INDEX NAME)



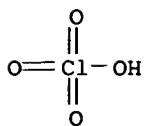
●1/2 Co(II)

RN 10421-48-4 HCAPLUS
 CN Nitric acid, iron(3+) salt (8CI, 9CI) (CA INDEX NAME)



●1/3 Fe(III)

RN 13770-18-8 HCAPLUS
 CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

CC 1-5 (Pharmacology)

IT 814-80-2 1271-19-8 7647-10-1, Palladium chloride (PdCl₂)
 7718-54-9, Nickel chloride (NiCl₂), biological studies 7733-02-0
 7758-94-3, Iron chloride (FeCl₂) 7803-55-6 10025-99-7
 10099-74-8 10102-06-4 10141-05-6 10421-48-4
 12027-67-7 12244-57-4 13721-39-6 13770-16-6
 13770-18-8 15189-51-2 24419-56-5 27774-13-6

RL: BAC (Biological activity or effector, except adverse); BSU
 (Biological study, unclassified); THU (Therapeutic use); BIOL
 (Biological study); USES (Uses)

(antiviral activity of, human immunodeficiency virus type 1
 aspartic proteinase inhibition and electronic configuration in
 relation to)

L88 ANSWER 29 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1992:257840 HCAPLUS

DOCUMENT NUMBER: 116:257840

TITLE: Liquid membranes for separation of gaseous
olefins from alkanes

INVENTOR(S): Blachman, Marc W.; Tsou, Dean T.

PATENT ASSIGNEE(S): Standard Oil Co., USA

SOURCE: Eur. Pat. Appl., 12 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 458598	A2	19911127	EP 1991-304602	1991 0521
EP 458598	A3	19920311		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
CA 2040798	AA	19911126	CA 1991-2040798	1991 0418
ZA 9103411	A	19920226	ZA 1991-3411	1991 0506
BR 9102047	A	19911224	BR 1991-2047	1991 0517
JP 04227823	A2	19920817	JP 1991-116332	1991 0521
CN 1056826	A	19911211	CN 1991-103420	1991 0524
RU 2045509	C1	19951010	RU 1991-4895488	1991 0524

US 5135547 A 19920804 US 1991-721909

1991
0620

PRIORITY APPLN. INFO.:

US 1990-528849 A

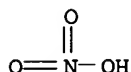
1990
0525

AB The title membranes comprise porous supports, aqueous solns of metal salts coordinating with olefins, and aliphatic carbonates as cosolvents. Thus, cellulose (mol. weight 6000-8000) disks were impregnated with a solution of MeOH, H₂O, and 3N AgBF₄ in 50% aqueous propylene carbonate (I) and precipitating in 50% aqueous I gave a liquid membrane with C₂H₄ and C₂H₆ permeability 2×10^{-7} and 3.0×10^{-10} mL-cm/cm²-5 cm Hg, resp.

IT 7761-88-8, Silver nitrate, uses 14104-20-2, Silver tetrafluoroborate
 RL: USES (Uses)
 (in liquid membranes for separating gaseous olefins and alkanes)

RN 7761-88-8 HCAPLUS

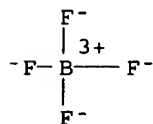
CN Nitric acid silver(1+) salt (8CI, 9CI) (CA INDEX NAME)



● Ag(I)

RN 14104-20-2 HCAPLUS

CN Borate(1-), tetrafluoro-, silver(1+) (8CI, 9CI) (CA INDEX NAME)



● Ag(I) +

IC ICM B01D061-38
 ICS B01D053-22; C07C007-144

CC 45-4 (Industrial Organic Chemicals, Leather, Fats, and Waxes)

IT Ceramic materials and wares
 Glass, oxide
 Metals, preparation
 Polyamides, uses
 Polycarbonates, uses
 Polyimides, uses
 Polysulfones, uses
 RL: USES (Uses)
 (supports, for liquid membranes for olefin-alkane separation)

IT 96-49-1, Ethylene carbonate 108-32-7, Propylene carbonate
 7761-88-8, Silver nitrate, uses 7775-41-9, Silver
 fluoride 14104-20-2, Silver tetrafluoroborate
 RL: USES (Uses)
 (in liquid membranes for separating gaseous olefins and alkanes)

L88 ANSWER 30 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1990:56778 HCAPLUS
 DOCUMENT NUMBER: 112:56778
 TITLE: Mechanistic studies of the oxidative-coupling polymerization of 2,6-dimethylphenol. Part V. Effect of different copper counter-ions on the structure of the copper complex, its catalytic activity and specificity for polymer formation
 AUTHOR(S): Viersen, F. J.; Challa, G.; Reedijk, J.
 CORPORATE SOURCE: Lab. Polym. Chem., Univ. Groningen, Groningen, 9747 AG, Neth.
 SOURCE: Recueil des Travaux Chimiques des Pays-Bas (1989), 108(7-8), 247-55
 CODEN: RTCPA3; ISSN: 0165-0513
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB In studying the mechanism of the oxidation coupling polymerization of 2,6-dimethylphenol, the effect of the Cu counter-ion was also investigated. This polymerization is catalyzed by Cu(II)-amine complexes. The counter-ions were divided into strongly coordinating (Cl⁻ and Br⁻), weakly coordinating (NO₃⁻), and noncoordinating counter-ions (ClO₄⁻, CF₃SO₃⁻ and BF₄⁻). The active catalyst, or its precursor, is the chloro-bridged, or bromo-bridged, dinuclear copper complex with hydroxide acting as a co-catalyst required for the formation of strongly coordinating phenolate anions. Although large differences in reactivity were observed, the product composition, i.e., the fraction of polymer and diphenoquinone side-product, was not affected by the counter-ion used.

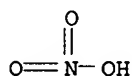
IT 3251-23-8, Copper dinitrate 13770-18-8, Copper diperchlorate 34946-82-2, Copper ditriflate 38465-60-0

RL: CAT (Catalyst use); USES (Uses)

(catalyst, containing tetramethylethylenediamine, for polymerization of dimethylphenol, mechanism in relation to)

RN 3251-23-8 HCAPLUS

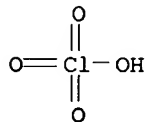
CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

RN 13770-18-8 HCAPLUS

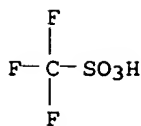
CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

RN 34946-82-2 HCAPLUS

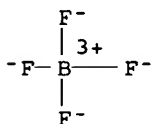
CN Methanesulfonic acid, trifluoro-, copper(2+) salt (9CI) (CA INDEX NAME)



●1/2 Cu(II)

RN 38465-60-0 HCAPLUS

CN Borate(1-), tetrafluoro-, copper(2+) (2:1) (9CI) (CA INDEX NAME)



●1/2 Cu(II) 2+

CC 35-3 (Chemistry of Synthetic High Polymers)

IT 3251-23-8, Copper dinitrate 7447-39-4, Copper
dichloride, uses and miscellaneous 7789-45-9, Copper dibromide
13770-18-8, Copper diperchlorate 34946-82-2,
Copper ditriflate 38465-60-0

RL: CAT (Catalyst use); USES (Uses)

(catalyst, containing tetramethylethylenediamine, for polymerization of
dimethylphenol, mechanism in relation to)

L88 ANSWER 31 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1989:525906 HCAPLUS

DOCUMENT NUMBER: 111:125906

TITLE: Atom formation function in electrothermal
atomic absorption spectrometry and its
application to analytical chemistry. VI.
Effects of anions, acids, alkali and alkaline
earth salts and determination of some metals
in biological samples under chemical
interference-free conditions

AUTHOR(S): Nakamura, Susumu; Kubota, Masaaki

CORPORATE SOURCE: Natl. Chem. Lab. Ind., Tskuba, Japan

SOURCE: Kagaku Gijutsu Kenkyusho Hokoku (1988), 83(6),
263-72

CODEN: KGKHEP; ISSN: 0388-3213

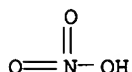
DOCUMENT TYPE: Journal

LANGUAGE: Japanese

AB Matrix interferences in electrothermal atomic absorption spectrometry
were evaluated by the atom formation model function given in the
authors' previous paper. Activation energies calculated from the
absorbance signal using the function reveal the chemical state of an
analyte at its atomization stage; i.e., whether a chemical bond
exists between the analyte and concomitants or not. With Cu
sulfate, nitrate, perchlorate and chloride, signals of Cu were the
same as those obtained with Cu metal. However, the signals
changed when adding H₂SO₄, HNO₃, HClO₄, and HCl. Similarly, Fe
signals showed interference with H₂SO₄ and HCl but not with Fe
salts. The activation energies obtained with Cu and Fe metals
agreed with those obtained by the addition of the acids within the

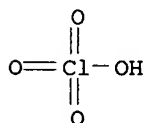
precision of the measurement. This demonstrates that acid interferences are not due to combination of analyte with matrixes. To clarify whether the effects of alkali and alkaline earth salts are due to chemical interference or not, activation energies of the analytes were calculated from signals and furnace temps. using the atom formation equation. In the case of Cu, the coexistence of nitrates and/or perchlorates of alkali and alkaline earth elements is thought to cause chemical interference, because these salts decrease the activation energies as well as the signal of the analyte. No remarkable chemical interference occurs with alkali and alkaline earth sulfates and/or chlorides. This suggests that the interference is not caused by chemical bonding between the analytes and the alkali and alkaline earth elements but between the analytes and the anion which sep. from the alkali and alkaline earth elements at high temps. Thermal gravimetric plots are given for some of the Cu and Fe salts as well as for the acids. A fast response system was applied to the determination of Cu, Fe, Cd and Zn in biol. samples. Based on the atom formation model function, activation energies of these elements at the atomization stage were measured to ascertain chemical interferences and select interference-free anal. conditions. Activation energies obtained for Cu, Fe and Zn metal in the absence of a matrix were in agreement with those obtained for these metals contained in NBS biol. standard reference materials. Also, anal. values agreed well with the certified ones within the precision of the present method. These results demonstrate that chemical interferences are negligibly small under the anal. conditions selected.

IT 3251-23-8, Cupric nitrate 13770-18-8, Cupric perchlorate
 RL: AMX (Analytical matrix); ANST (Analytical study)
 (copper determination in, by electrothermal atomic absorption spectrometry, matrix effect in)
 RN 3251-23-8 HCAPLUS
 CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



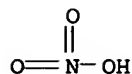
●1/2 Cu(II)

RN 13770-18-8 HCAPLUS
 CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

IT 10421-48-4, Ferric nitrate
 RL: AMX (Analytical matrix); ANST (Analytical study)
 (iron determination in, by electrothermal atomic absorption spectrometry, matrix effect in)
 RN 10421-48-4 HCAPLUS
 CN Nitric acid, iron(3+) salt (8CI, 9CI) (CA INDEX NAME)



● 1/3 Fe(III)

CC 79-6 (Inorganic Analytical Chemistry)

Section cross-reference(s): 9

IT Liver, **composition**

Plant analysis

(transition metal determination in, by electrothermal atomic absorption spectrometry under chemical interference-free conditions)

IT 3251-23-8, Cupric nitrate 7447-39-4, Cupric chloride, analysis 7758-98-7, Cupric sulfate, analysis 13770-18-8, Cupric perchlorate

RL: AMX (Analytical matrix); ANST (Analytical study)

(copper determination in, by electrothermal atomic absorption spectrometry, matrix effect in)

IT 7705-08-0, Ferric chloride, analysis 10028-22-5, Ferric sulfate 10421-48-4, Ferric nitrate 13537-24-1, Ferric perchlorate

RL: AMX (Analytical matrix); ANST (Analytical study)

(iron determination in, by electrothermal atomic absorption spectrometry, matrix effect in)

L88 ANSWER 32 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1988:83135 HCAPLUS

DOCUMENT NUMBER: 108:83135

TITLE: The dynamics of water molecules in ionic solution: II. Quasi-elastic neutron scattering and tracer diffusion studies of the proton and ion dynamics in concentrated nickel(2+), copper(2+) and neodymium(3+) aqueous solutions

AUTHOR(S): Salmon, P. S.; Howells, W. S.; Mills, R.

CORPORATE SOURCE: H. H. Wills Phys. Lab., Univ. Bristol, Bristol, BS8 1TL, UK

SOURCE: Journal of Physics C: Solid State Physics (1987), 20(34), 5727-47

CODEN: JPSOAW; ISSN: 0022-3719

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The technique of high-resolution incoherent quasi-elastic neutron scattering (QENS) is used to measure the translational diffusive motion of H₂O protons in concentrated NiX₂, CuX₂, and NdX₃ aqueous solns. in which X = Cl⁻, ClO₄⁻, and/or NO₃⁻. The technique of tracer diffusion is also used in order to measure the cation self-diffusion coefficient in concentrated NiX₂ and CuX₂ aqueous solns. in which X = Cl⁻ and ClO₄⁻. At room temperature (.simeq.25°), the cation-water proton binding times are described by the limits $\tau_1(\text{Ni}^{2+}) \gtrsim 5 \times 10^{-9} \text{ s}$, $\tau_1(\text{Cu}^{2+}) \sim 10^{-10} \text{ s}$, and $\tau_1(\text{Nd}^{3+}) > 10^{-10} \text{ s}$ and that for the Ni²⁺ solns., which are in slow exchange, the diffusion coefficient of protons bound to the cation is measurable by using the QENS method. A 2-state model for slow exchange in which those water molcs. not bound to the cation are in bulk water does not account for the observed proton diffusion in any of the solns. It is shown, however, that for Ni²⁺ solns. the proton dynamics can be described by specifying 2 addnl. environments which are identified with H₂O in the second shell of the cation and H₂O associated with the anions. In NiCl₂ solns. this model does not give rise to a second-shell

diffusion coefficient which is greater than that for pure H₂O.

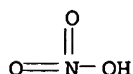
IT 13138-45-9, Nickel dinitrate 13770-18-8, Copper diperchlorate

RL: PRP (Properties)

(diffusion and liquid structure in concentrated aqueous, neutron scattering study of)

RN 13138-45-9 HCAPLUS

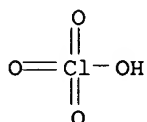
CN Nitric acid, nickel(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Ni(II)

RN 13770-18-8 HCAPLUS

CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

CC 68-6 (Phase Equilibriums, Chemical Equilibriums, and Solutions)

IT 7447-39-4, Cupric chloride, properties 7718-54-9, Nickel dichloride, properties 10024-93-8, Neodymium trichloride 13138-45-9, Nickel dinitrate 13637-71-3, Nickel diperchlorate 13770-18-8, Copper diperchlorate

RL: PRP (Properties)

(diffusion and liquid structure in concentrated aqueous, neutron scattering study of)

L88 ANSWER 33 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1986:575404 HCAPLUS

DOCUMENT NUMBER: 105:175404

TITLE: Eutectic microknit composite explosives

INVENTOR(S): Jessop, Harvey A.; Abegg, M. Taylor; Peterson, John A.; Butler, Jay W.; McCormick, Ronald F.; Lavery, Ormond F.

PATENT ASSIGNEE(S): Megabar Explosives Corp., USA

SOURCE: U.S., 4 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 4600452	A	19860715	US 1984-578179	1984 0208

PRIORITY APPLN. INFO.:

US 1984-578179

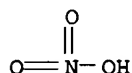
1984
0208

AB Solid, NH_4NO_3 -based eutectic microcryst. (microknight) **explosives**, propellants or gas generators comprising essentially anhydrous **mixts.** of NH_4NO_3 , soluble **explosives**, surfactants, hydrocarbon fuels, additives, and other non-nitrate oxidizer salts are made by 3 methods involving intimate **mixing** or dissoln. of the components in the molten state to a fluid in which the molten salts can be supercooled before onset of crystal nucleation and reversion from the fluid state. The 1st method involves only **mixing**, dissoln., and supercooling. The 2nd and 3rd methods include unstable, oil-continuous and salt-continuous emulsions, resp. Thus, an **explosive** prepared by dissolving ethylenediamine mononitrate monoperchlorate 40.0, sorbitan monooleate 4.0, hexylamine nitrate 2.0, and modified guar 2.0 weight% in a molten **mixture** of NH_4NO_3 44.0 and KNO_3 8.0 weight% had a d. 1.5 g/cm³ in 6.3-cm-diameter cartridges and was detonated by a 15 g booster.

IT 3251-23-8 13770-18-8
RL: USES (Uses)
(**explosives** and propellants and gas generators, ammonium nitrate eutectic crystalline **composites**)

RN 3251-23-8 HCAPLUS

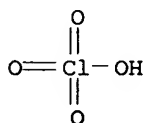
CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

RN 13770-18-8 HCAPLUS

CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

IC ICM C06B045-10

INCL 149019300

CC 50-2 (Propellants and Explosives)

ST nitrate eutectic microcryst **explosive** propellant; microknight eutectic **composite explosive**

IT Naphtha
RL: USES (Uses)
(coal-tar, in ammonium nitrate eutectic microcryst. **composite explosives** and propellants and gas generators)

IT Perlite
RL: USES (Uses)
(d.-control and sensitizing agents, in ammonium nitrate eutectic microcryst. **composite explosives**)

- and propellants and gas generators)
- IT Polyacetylenes
Polyesters, uses and miscellaneous
Polyethers
Polysulfides
RL: USES (Uses)
(fuels, in ammonium nitrate eutectic microcryst.
composite explosives and propellants and gas
generators)
- IT Gases
(generation of, ammonium nitrate microcryst. eutectic
compos. for)
- IT Hydrocarbon oils
RL: USES (Uses)
(in ammonium nitrate eutectic microcryst. **composite
explosives** and propellants and gas generators)
- IT Perfluorocarbons
RL: USES (Uses)
(poly-, fuels, in ammonium nitrate eutectic microcryst.
composite explosives and propellants and gas
generators)
- IT Alkanes, polymers
Phenols, polymers
RL: USES (Uses)
(polymers, fuels, in ammonium nitrate eutectic microcryst.
composite explosives and propellants and gas
generators)
- IT **Explosives**
Propellants
(**composite**, ammonium nitrate microcryst. eutectic)
- IT Amines, uses and miscellaneous
RL: USES (Uses)
(hydrogenated tallow alkyl, in ammonium nitrate eutectic
microcryst. **composite explosives** and
propellants and gas generators)
- IT Alkenes, uses and miscellaneous
Amines, uses and miscellaneous
RL: USES (Uses)
(poly-, fuels, in ammonium nitrate eutectic microcryst.
composite explosives and propellants and gas
generators)
- IT 27178-87-6
RL: USES (Uses)
(crystal habit modifiers, in ammonium nitrate eutectic
microcryst. **composite explosives** and
propellants and gas generators)
- IT 7757-79-1P, preparation 7778-74-7P 7779-88-6P 7790-69-4P
7790-98-9P 3251-23-8 10099-74-8 10377-66-9
13637-61-1 13637-76-8 13770-16-6 **13770-18-8**
RL: PREP (Preparation)
(**explosives** and propellants and gas generators,
ammonium nitrate eutectic crystalline **composites**)
- IT 6484-52-2P, preparation
RL: PREP (Preparation)
(**explosives** and propellants and gas generators,
eutectic microcryst. **composite**)
- IT 9003-53-6
RL: USES (Uses)
(fuels, in ammonium nitrate eutectic microcryst.
composite explosives and propellants and gas
generators)
- IT 60676-86-0
RL: USES (Uses)
(fume, d.-control and sensitizing agent, in ammonium nitrate
eutectic microcryst. **composite explosives**
and propellants and gas generators)

IT 1338-43-8 3414-89-9 9000-30-0 14999-73-6 20829-66-7
24979-97-3 25155-30-0 37836-27-4 99661-21-9 99684-85-2

RL: USES (Uses)

(in ammonium nitrate eutectic microcryst. **composite explosives** and propellants and gas generators)

L88 ANSWER 34 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1986:151889 HCAPLUS

DOCUMENT NUMBER: 104:151889

TITLE: Soft **composite explosives**

INVENTOR(S): Abegg, M. Taylor; Peterson, John A.; Jessop, Harvey A.

PATENT ASSIGNEE(S): Megabar Explosives Corp., USA

SOURCE: U.S., 4 pp.
CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 4552597	A	19851112	US 1984-641687	1984 0817

PRIORITY APPLN. INFO.: US 1984-641687

1984
0817

OTHER SOURCE(S): MARPAT 104:151889

AB Essentially anhydrous, soft grease-like, stable, **composite explosives** with ≤ 3 weight% moisture and O balance +5 to -50% are prepared as melt-in-fuel emulsions in which the discontinuous phase is a eutectic **mixture** comprising NH_4NO_3 , ≥ 1 oxidizer salts, and ≥ 1 soluble compds. and the continuous phase is an emulsifier-fuel **mixture** and comprises <2.5 weight% of the **composition**. Thus, a **compn** consisting of NH_4NO_3 67.0, KNO_3 14.0, KClO_4 5.0, glycerin 10.0, sorbitan monooleate 0.4, oleylamine linoleate 0.4, mineral oil 1.2, and microspheres 2.0 weight% had grease-like consistency at 20°, d. 1.25 g/cm³, and was detonated in 3.8 cm sizes.

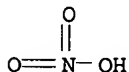
IT 3251-23-8 13770-18-8

RL: USES (Uses)

(oxidizers, in ammonium nitrate grease-like emulsion **explosives**)

RN 3251-23-8 HCAPLUS

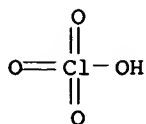
CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Cu(II)

RN 13770-18-8 HCAPLUS

CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

IC ICM C06B045-00
 INCL 149002000
 CC 50-2 (Propellants and Explosives)
 ST ammonium nitrate grease like **explosive**
 IT **Explosives**
 (emulsion-melt-in-fuel, ammonium nitrate-based grease-like)
 IT Hydrocarbon oils
 Perlite
 RL: USES (Uses)
 (**explosives** containing, in grease-like ammonium
 nitrate-based emulsion)
 IT Emulsions
 (melt-in-fuel **explosive**, ammonium nitrate-based,
 grease-like)
 IT Spheres
 (micro-, **explosives**, grease-like ammonium
 nitrate-based emulsion)
 IT 56-81-5, uses and miscellaneous 151-21-3, uses and miscellaneous
 1338-43-8 3414-89-9 7757-79-1, uses and miscellaneous
 7778-74-7 7790-98-9 18423-20-6 20256-00-2 20748-72-5
 20829-66-7 38482-52-9 101559-65-3 101559-66-4
 RL: USES (Uses)
 (**explosives**, grease-like ammonium nitrate-based
 emulsion)
 IT 6484-52-2, uses and miscellaneous
 RL: USES (Uses)
 (**explosives**, melt-in-fuel emulsion, grease-like)
 IT 7631-86-9, uses and miscellaneous
 RL: USES (Uses)
 (fume, in ammonium nitrate grease-like emulsion
 explosives)
 IT 3251-23-8 7779-88-6 10099-74-8 10377-66-9
 13637-61-1 13637-76-8 13770-16-6 13770-18-8
 RL: USES (Uses)
 (oxidizers, in ammonium nitrate grease-like emulsion
 explosives)

L88 ANSWER 35 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 1980:97818 HCAPLUS
 DOCUMENT NUMBER: 92:97818
 TITLE: Corrosion-retarding composition
 PATENT ASSIGNEE(S): Dow Chemical Co., USA
 SOURCE: Neth. Appl., 33 pp.
 CODEN: NAXXAN
 DOCUMENT TYPE: Patent
 LANGUAGE: Dutch
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
NL 7712284	A	19790510	NL 1977-12284	1977

PRIORITY APPLN. INFO.: NL 1977-12284 A 1108
1977
1108

AB A corrosion-retarding composition for ferrous metals contains an alkanolamine, CuS or a Cu salt, and a source of S atoms, such as H₂S, S, or COS in combination with an oxidant. In acid-gas scrubbing adsorption solns., S is set free, partly as polysulfide. Optionally, the alkanolamine is RR₁NCR₂CR₂OH (R and R₁ = H or CR₂CR₂OH; R₂ = H or C1-3 alkyl). Thus, AISI 1010 [12725-33-6] steel had an inhibition efficiency of 96% in aqueous 80% monoethanolamine [141-43-5] saturated with H₂S at room temperature and containing CuS and KMnO₄ each 1000 ppm.

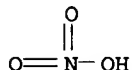
IT 3251-23-8 13770-18-8 38465-60-0

RL: USES (Uses)

(alkanolamine corrosion inhibitors containing, for steel in gas scrubbers)

RN 3251-23-8 HCAPLUS

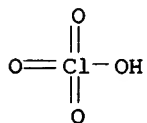
CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

RN 13770-18-8 HCAPLUS

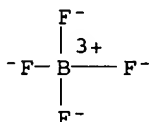
CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

RN 38465-60-0 HCAPLUS

CN Borate(1-), tetrafluoro-, copper(2+) (2:1) (9CI) (CA INDEX NAME)



●1/2 Cu(II) 2+

IC C23F011-08

CC 55-9 (Ferrous Metals and Alloys)

IT 142-71-2 533-01-7 584-08-7 660-60-6 814-91-5 1308-09-4
1313-60-6 1317-39-1, uses and miscellaneous 1317-40-4

3251-23-8 7447-39-4, uses and miscellaneous 7553-56-2,
 uses and miscellaneous 7631-90-5 7681-11-0, uses and
 miscellaneous 7704-34-9, uses and miscellaneous 7722-64-7
 7722-84-1, uses and miscellaneous 7726-95-6, uses and
 miscellaneous 7727-21-1 7727-54-0 7758-05-6 7775-09-9
 7789-38-0 7789-45-9 7789-80-2 7790-21-8 7790-28-5
 10118-76-0 10588-01-9 11138-47-9 12134-35-9 13444-71-8
 13587-35-4 13767-34-5 13767-71-0 13770-18-8
 14220-26-9 14446-13-0 15061-57-1 16712-25-7 22205-45-4
 23414-72-4 36386-77-3 38465-60-0

RL: USES (Uses)

(alkanolamine corrosion inhibitors containing, for steel in gas scrubbers)

L88 ANSWER 36 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1979:190718 HCAPLUS

DOCUMENT NUMBER: 90:190718

TITLE: Composition for inhibiting the corrosion of ferrous metals

INVENTOR(S): Asperger, Robert G.; Krawczyk, Leroy S.; Oakes, Billy D.

PATENT ASSIGNEE(S): Dow Chemical Co., USA

SOURCE: U.S., 11 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4143119	A	19790306	US 1977-807089	1977 0616
CA 1080956	A1	19800708	CA 1977-289921	1977 1031
PRIORITY APPLN. INFO.:			US 1976-648620	A2 1976 0112
			US 1977-807089	A 1977 0616

AB Cu-containing corrosion inhibitors are used for steels in contact with acid gases, such as H₂S, CO₂, and COS, in acid gas removal from sour gas. Cu or Cu compds. and S or S compds. are maintained in solution, such as Cu sulfide dissolved in aqueous alkanolamine or monoethanolamine [141-43-5] solution used for acid gas removal from natural or synthetic gases. The absorbents for acid-gas stripping are RR1NC2R42OH (R, R1 H or CR23CR22OH; R2H or C1-3 alkyl) alone or in combination with sulfolane [126-33-0], K₂CO₃, or diglycolamines. The preferred absorbents when only CO₂ is present are monoethanolamine, diisopropanolamine [110-97-4] with sulfolane, diethanolamine [111-42-2], diglycolamine [533-01-7], and Methicol [623-57-4] in aqueous solns. Oxidizing agents, such as S, KMnO₄, NaMnO₄, Ca(MnO₄)₂, Sr(MnO₄)₂, Zn(MnO₄)₂, K or Na persulfate, KIO₃, Ca(IO₃)₂, NaBrO₃, Na₂Cr₂O₇, K₂Cr₂O₇, O, H₂O₂, and Na₂O₂ to produce S from H₂S dissolved in the absorbent. Thus, AISI 1010 [12725-33-6] coupon was immersed in aqueous 80% monoethanolamine solution saturated with H₂S at room temperature and used for stripping acid gases at 120° from the absorbent for 15 h and had an inhibition efficiency of 96% when CuS and KMnO₄ each 1000 ppm were added.

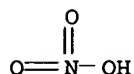
IT 3251-23-8 13770-18-8 38465-60-0

RL: USES (Uses)

(corrosion inhibition of steels in solution containing, in acid gas stripping from natural and synthetic fuel gases)

RN 3251-23-8 HCAPLUS

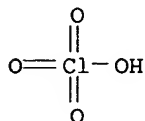
CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

RN 13770-18-8 HCAPLUS

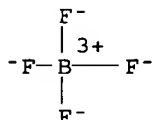
CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

RN 38465-60-0 HCAPLUS

CN Borate(1-), tetrafluoro-, copper(2+) (2:1) (9CI) (CA INDEX NAME)



●1/2 Cu(II) 2+

IC B01D053-34

INCL 423226000

CC 55-9 (Ferrous Metals and Alloys)

Section cross-reference(s): 51

IT 142-71-2 533-01-7 598-54-9 1303-92-0 1308-09-4

1317-38-0, uses and miscellaneous 1317-40-4 3251-23-8

7057-72-9 7447-39-4, uses and miscellaneous 7617-31-4

7758-98-7, uses and miscellaneous 7789-45-9 12643-19-5

12771-00-5 13395-16-9 13767-34-5 13767-71-0

13770-18-8 16712-25-7 22205-45-4 36386-77-3

38465-60-0 40974-00-3 70283-75-9

RL: USES (Uses)

(corrosion inhibition of steels in solution containing, in acid gas stripping from natural and synthetic fuel gases)

L88 ANSWER 37 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1978:519686 HCAPLUS

DOCUMENT NUMBER: 89:119686

TITLE: An electrochemical study of copper(II) nitrate and perchlorate in N,N-dimethylformamide

AUTHOR(S): Braun, Robert D.

CORPORATE SOURCE: Dep. Chem., Univ. Southwestern Louisiana, Lafayette, LA, USA

SOURCE: Analytica Chimica Acta (1978), 99(2), 325-31
CODEN: ACACAM; ISSN: 0003-2670

DOCUMENT TYPE: Journal

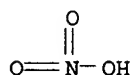
LANGUAGE: English

AB Polarog., cyclic voltammetric and controlled-potential coulometric studies of Cu(II) nitrate and perchlorate in DMF are reported. Cu(II) in perchlorate solns. is directly reduced in a 2-electron step to Cu metal at Pt electrodes and to a Cu amalgam at Hg electrodes. Cu(II) in the presence of nitrate forms a complex of composition Cu(NO₃)₂ in DMF; the dissociation constant, measured polarog., is 9×10^{-5} . The Cu(II) nitrate complex is electrochem. reduced in 2 steps consisting of a reversible dissociation of the complex followed by direct reduction of Cu(II) ion to Cu. The diffusion coeffs. of Cu(II) ion and the Cu(II) nitrate complex are 4.91×10^{-6} cm² s⁻¹ and 4.33×10^{-6} cm² s⁻¹, resp.

IT 3251-23-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(reduction of, electrochem., on mercury and platinum in DMF, concentration in relation to)

RN 3251-23-8 HCAPLUS

CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)

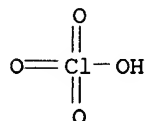


● 1/2 Cu(II)

IT 13770-18-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(reduction of, electrochem., on mercury and platinum, in DMF)

RN 13770-18-8 HCAPLUS

CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Cu(II)

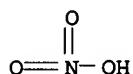
CC 72-11 (Electrochemistry)

IT 3251-23-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(reduction of, electrochem., on mercury and platinum in DMF, concentration in relation to)

IT 13770-18-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(reduction of, electrochem., on mercury and platinum, in DMF)

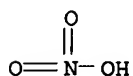
L88 ANSWER 38 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1978:480997 HCAPLUS
 DOCUMENT NUMBER: 89:80997
 TITLE: Ion solvation and ion association in electrolyte-containing solvent mixtures
 AUTHOR(S): Decker, Ulrich; Hahn, Rainer; Rudakoff, Georg
 CORPORATE SOURCE: Sekt. Verfahrenchem., Tech. Hochsch. "Carl Schorlemmer", Leuna-Merseberg, Ger. Dem. Rep.
 SOURCE: Zeitschrift fuer Physikalische Chemie (Leipzig) (1978), 259(3), 497-512
 CODEN: ZPCLAH; ISSN: 0372-9680
 DOCUMENT TYPE: Journal
 LANGUAGE: German
 AB Changes in extinction coeffs., elec. conductivity, viscosity, Walden product, excess volume, and NMR shifts were used to calculate ion association and solvation equilibrium consts. for various salts (LiCl, CuCl₂, Ni(NO₃)₂, Co(NO₃)₂, CoCl₂, NiCl₂, Cu(ClO₄)₂, NiSO₄, CuSO₄, NaCl, KCl, LiBr, KBr, NaBr, NaI, KI) in aqueous EtOH or aqueous Me₂CO.
 IT 10141-05-6 13138-45-9 13770-18-8
 RL: PRP (Properties)
 (ion association and solvation equilibrium of, in aqueous acetone)
 RN 10141-05-6 HCAPLUS
 CN Nitric acid, cobalt(2+) salt (8CI, 9CI) (CA INDEX NAME)



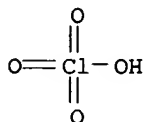
●1/2 Co(II)

RN 13138-45-9 HCAPLUS
 CN Nitric acid, nickel(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Ni(II)

RN 13770-18-8 HCAPLUS
 CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

CC 68-4 (Phase Equilibriums, Chemical Equilibriums, and Solutions)
 IT 7646-79-9, properties 7718-54-9, properties 7758-98-7,
 properties 7786-81-4 10141-05-6 13138-45-9
 13770-18-8

RL: PRP (Properties)
(ion association and solvation equilibrium of, in aqueous acetone)

L88 ANSWER 39 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1968:31280 HCAPLUS
DOCUMENT NUMBER: 68:31280
TITLE: Wood **preservatives**
PATENT ASSIGNEE(S): Farbenfabriken Bayer A.-G.
SOURCE: Brit., 6 pp.
CODEN: BRXXAA
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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GB 1091998		19671122	GB	
DE 1492509			DE	
FR 1496647			FR	
PRIORITY APPLN. INFO.:			DE	
				1965
				1015
			DE	
				1966
				0407

AB A **preservative** having high effectiveness, low corrosive action, and desirably slow fixation in the wood contains as active ingredients Cu and (or) Zn compds., a complex fluoride, and a compound of Cr(VI) with an atomic ratio of Cr(VI) to F $\geq 3:6$. Preferred **composition** ranges are 6-15% Cu and (or) Zn, 10-20% F, and 20-30% Cr(VI), with Cr(VI)-F = 4-5:6. In an example, a formulation containing 44.0% CuSiF₆·6H₂O and 56.0% CrO₃ gave a weight loss of 0.8-15.6 g./sq. m. on Fe in a 15-day corrosion cycle in concns. of 2-20%. When pine sapwood is fully impregnated with a 4% solution, 40% of the Cu and 50% of the F are leached according to DIN Standard 52176. Threshold retention of the **preservative**, after leaching, against Basidiomycetes is 6 kg./m.³, against dry-rot fungi 11 kg./m.³

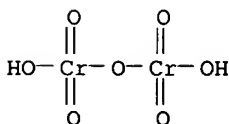
IT 7789-09-5 38465-60-0

RL: USES (Uses)

(as **preservative**, for wood)

RN 7789-09-5 HCAPLUS

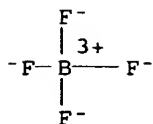
CN Chromic acid (H₂Cr₂O₇), diammonium salt (9CI) (CA INDEX NAME)



● 2 NH₃

RN 38465-60-0 HCAPLUS

CN Borate(1-), tetrafluoro-, copper(2+) (2:1) (9CI) (CA INDEX NAME)



●1/2 Cu(II) 2+

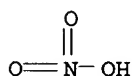
IC A01N
 CC 43 (Cellulose, Lignin, Paper, and Other Wood Products)
 ST DRY ROT PRESERVATIVES; FUNGICIDES WOOD; WOOD
 PRESERVATIVES; COPPER WOOD PRESERVATIVES; ZINC
 WOOD PRESERVATIVES; PRESERVATIVES WOOD
 IT Wood preservatives
 (fluorine-containing inorg. salts as)
 IT 1308-38-9, uses and miscellaneous 1317-38-0, uses and
 miscellaneous 1341-49-7 7758-99-8 7789-09-5
 12021-69-1 16949-65-8 18433-42-6 18972-56-0 26062-07-7
 38465-60-0
 RL: USES (Uses)
 (as preservative, for wood)

L88 ANSWER 40 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 1968:25267 HCAPLUS
 DOCUMENT NUMBER: 68:25267
 TITLE: Copper(II) cyanate complexes in aceton
 AUTHOR(S): Valtr, Zdenek; Quastlerova, M.
 CORPORATE SOURCE: Tech. Univ., Bratislava, Czech.
 SOURCE: Zeitschrift fuer Chemie (1966), 6(9), 348
 CODEN: ZECEAL; ISSN: 0044-2402
 DOCUMENT TYPE: Journal
 LANGUAGE: German

AB The absorption spectra of a mixture of CuCl₂, Cu(NO₃)₂, or Cu(ClO₄)₂
 and an increasing amount of LiOCN were measured to study the
 formation of Cu(II) cyanato complexes in Me₂CO. The dependence of
 the absorption on the composition of the isomolar solns.
 (Job's curve) for the system CuCl₂-LiOCN-Me₂CO shows an absorption
 maximum at 475 mμ and the formation of the complex with the mole
 ratio Cu²⁺:OCN⁻ = 1:1.5.

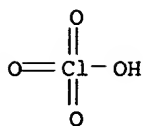
IT 3251-23-8 13770-18-8
 RL: PRP (Properties)
 (spectrum (visible and uv) of lithium cyanate mixts. with,
 complex formation in relation to)

RN 3251-23-8 HCAPLUS
 CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

RN 13770-18-8 HCAPLUS
 CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

CC 73 (Spectra and Other Optical Properties)

IT 3251-23-8 7447-39-4, properties 13770-18-8

RL: PRP (Properties)

(spectrum (visible and uv) of lithium cyanate mixts. with, complex formation in relation to)

L88 ANSWER 41 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1964:401324 HCAPLUS

DOCUMENT NUMBER: 61:1324

ORIGINAL REFERENCE NO.: 61:194g-h

TITLE: A Raman spectrophotometric comparison of interionic association in aqueous solutions of metal nitrates, sulfates, and perchlorates

AUTHOR(S): Hester, R. E.; Plane, R. A.

CORPORATE SOURCE: Cornell Univ., Ithaca, NY

SOURCE: Inorg. Chem. (1964), 3(5), 769-70

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

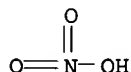
AB In a general study of metal oxyanion assocns. in aqueous solns., Raman spectra of near-saturated aqueous solns. of metal nitrates, sulfates, and perchlorates showed that complexes were more usual for nitrates than sulfates, and were not observed for perchlorates. Except for In, complexes of sulfates were solvent separated New frequencies arising from complexes of nitrates were given a C_{2v} point assignment. The order of dissymmetry in nitrates was Th⁴⁺ > In³⁺ > Cu²⁺ > Hg²⁺ > Ce³⁺ > Ca²⁺ > Zn²⁺, Al³⁺, Ag⁺ > Na⁺, K⁺, NH₄⁺. Detns. of M intensities of the ν₁(A₁) lines for sulfate and perchlorate ions indicated spectral constancy. The latter ion was endorsed for use as an internal standard for Raman line intensity measurements under usual aqueous conditions.

IT 3251-23-8, Copper nitrate, Cu(NO₃)₂ 10108-73-3, Cerium nitrate, Ce(NO₃)₃ 13770-18-8, Copper perchlorate, Cu(ClO₄)₂

(spectrum (Raman) of, interionic association and)

RN 3251-23-8 HCAPLUS

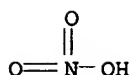
CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

RN 10108-73-3 HCAPLUS

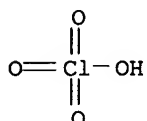
CN Nitric acid, cerium(3+) salt (8CI, 9CI) (CA INDEX NAME)



●1/3 Ce(III)

RN 13770-18-8 HCAPLUS

CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

CC 10 (Spectra and Some Other Optical Properties)

IT 3251-23-8, Copper nitrate, $\text{Cu}(\text{NO}_3)_2$ 6484-52-2, Ammonium nitrate 7446-18-6, Thallium sulfate, Tl_2SO_4 7487-88-9, Magnesium sulfate 7601-89-0, Sodium perchlorate 7601-90-3, Perchloric acid 7616-83-3, Mercury perchlorate, $\text{Hg}(\text{ClO}_4)_2$ 7733-02-0, Zinc sulfate 7757-79-1, Potassium nitrate 7757-82-6, Sodium sulfate, Na_2SO_4 7758-98-7, Copper sulfate 7761-88-8, Silver nitrate 7779-88-6, Zinc nitrate 7783-20-2, Ammonium sulfate 7783-93-9, Silver perchlorate, AgClO_4 7791-03-9, Lithium perchlorate 10043-01-3, Aluminum sulfate 10045-94-0, Mercury nitrate, $\text{Hg}(\text{NO}_3)_2$ 10108-73-3, Cerium nitrate, $\text{Ce}(\text{NO}_3)_3$ 10124-36-4, Cadmium sulfate 10124-37-5, Calcium nitrate 13464-82-9, Indium sulfate, $\text{In}_2(\text{SO}_4)_3$ 13473-90-0, Aluminum nitrate 13477-36-6, Calcium perchlorate 13529-74-3, Indium perchlorate, $\text{In}(\text{ClO}_4)_3$ 13597-95-0, Beryllium perchlorate 13637-76-8, Lead perchlorate, $\text{Pb}(\text{ClO}_4)_2$ 13770-18-8, Copper perchlorate, $\text{Cu}(\text{ClO}_4)_2$ 13770-61-1, Indium nitrate, $\text{In}(\text{NO}_3)_3$ 13823-29-5, Thorium nitrate, $\text{Th}(\text{NO}_3)_4$ 14017-46-0, Lanthanum perchlorate, $\text{La}(\text{ClO}_4)_3$ 14017-47-1, Cerium perchlorate, $\text{Ce}(\text{ClO}_4)_3$ 14452-39-2, Aluminum perchlorate 16045-17-3, Thorium perchlorate, $\text{Th}(\text{ClO}_4)_4$ 34781-33-4, Gallium sulfate (spectrum (Raman) of, interionic association and)

IT 10034-81-8, Magnesium perchlorate (tetrafluoroethylene polymer molding compns.)

L88 ANSWER 42 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1963:447430 HCAPLUS

DOCUMENT NUMBER: 59:47430

ORIGINAL REFERENCE NO.: 59:8514a-c

TITLE: Isolation of monoolefins by means of metallic salt solutions

AUTHOR(S): Krekeler, Hans W.; Hirschbeck, Josef M.; Schwenk, Ulrich

CORPORATE SOURCE: Farbwerke Hoechst A.-G., Frankfurt a.M.-Hoechst, Germany

SOURCE: Erdoel und Kohle (1963), 16(6-I), 551-60
CODEN: ERKOAJ; ISSN: 0367-1305

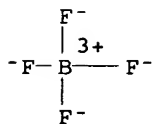
DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB Recent developments by Farbwerke Hoechst in the recovery of

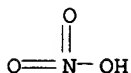
monoolefins, especially C₂H₄ and C₃H₆, by using Cu⁺ complex and Ag⁺ solns. are reviewed. The reversible absorption of olefins increases with their partial pressure and with increasing concentration of the metal salt up to a limiting value. For Cu⁺, the best anion is NO₃ and the best complex components are morpholine, HOCH(Me)CH₂NH₂, or HOC₂H₄NH₂. The best anion for Ag⁺ is excess BF₄⁻, which is better than ClO₄⁻. Cu⁺ solns. have a lower olefin capacity than Ag⁺ solns. because they give lower metal concns. They absorb olefins in different amts., e.g. more C₂H₄ than C₃H₆, but Ag⁺ salts absorb all olefins at the same high rate. CO is strongly absorbed by Cu⁺ solns., while Ag⁺ solns. do so only slightly. Experiences in recovery of olefins from both exptl. and production plants are given with respect to concns., viscosities, and stabilities of the absorbing solns., problems of material and corrosion, toxicological aspects, temperature and pressure conditions, and the influence of other gases (CO, H, H₂S, CO₂, C₂H₂, O, hydrocarbons). Production processes are described for separating olefins from cracked gas by use of an ethanolamine-CuNO₃ solution, for reconcn. of pure C₃H₆ or C₂H₄ from H-free waste gas by an AgBF₄ solution containing HBF₄, and for recovering C₂H₄ from H-containing waste gas by a AgBF₄ solution containing H₂O₂ and HBF₄. Combinations of the new processes with known separation processes are considered and possible applications are discussed.

IT 14104-20-2, Silver tetrafluoroborate, Ag[BF₄]
(olefin absorption by)
RN 14104-20-2 HCAPLUS
CN Borate(1-), tetrafluoro-, silver(1+) (8CI, 9CI) (CA INDEX NAME)



● Ag(I) +

IT 3251-29-4, Copper nitrate, CuNO₃
(olefin absorption by ethanolamine and)
RN 3251-29-4 HCAPLUS
CN Nitric acid, copper(1+) salt (9CI) (CA INDEX NAME)



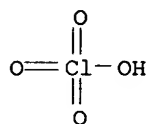
● Cu(I)

CC 27 (Petroleum and Petroleum Derivatives)
IT 14104-20-2, Silver tetrafluoroborate, Ag[BF₄]
(olefin absorption by)
IT 3251-29-4, Copper nitrate, CuNO₃
(olefin absorption by ethanolamine and)

L88 ANSWER 43 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1961:26746 HCAPLUS
DOCUMENT NUMBER: 55:26746
ORIGINAL REFERENCE NO.: 55:5212h-i,5213a

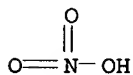
TITLE: The reaction of copper with suspensions of nitrosyl perchlorate
 AUTHOR(S): Hathaway, B. J.; Underhill, A. E.
 CORPORATE SOURCE: Univ. Hull, UK
 SOURCE: Journal of the Chemical Society, Abstracts (1960) 3705-11
 CODEN: JCSAAZ; ISSN: 0590-9791
 DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable
 AB Nitrosyl perchlorate reacts with Cu, when suspended in certain organic solvents, such as EtOAc or MeCN, according to the equation:

$$\text{Cu} + 2\text{NO} + \text{ClO}_4^- = \text{Cu}(\text{ClO}_4)_2 + 2\text{NO}.$$
 If the reaction is carried out at atmospheric pressure, the product is contaminated with $\text{Cu}(\text{NO}_3)_2$, but under reduced pressure, a solution of the pure perchlorate is obtained. In the presence of moisture, the solns. became turbid and precipitated gelatinous basic Cu perchlorate. The $\text{Cu}(\text{ClO}_4)_2$ is monomeric in boiling EtOAc, but some dissociation occurs in boiling MeCN. Elec. conductivity, visible and UV spectra have been measured with the perchlorate solns., and the IR absorption spectra of solid complexes, such as $\text{Cu}(\text{ClO}_4)_2 \cdot 4\text{MeCN}$ are discussed. Attempts to prepare pure anhydrous $\text{Cu}(\text{ClO}_4)_2$ were unsuccessful.
 IT 13770-18-8, Copper perchlorate
 (and basic perchlorates, from Cu reaction with NOClO_4)
 RN 13770-18-8 HCAPLUS
 CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

IT 3251-23-8, Copper nitrate, $\text{Cu}(\text{NO}_3)_2$
 (formation from Cu and NOClO_4)
 RN 3251-23-8 HCAPLUS
 CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



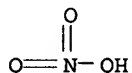
●1/2 Cu(II)

CC 6 (Inorganic Chemistry)
 IT 13770-18-8, Copper perchlorate
 (and basic perchlorates, from Cu reaction with NOClO_4)
 IT 3251-23-8, Copper nitrate, $\text{Cu}(\text{NO}_3)_2$
 (formation from Cu and NOClO_4)

L88 ANSWER 44 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 1958:43620 HCAPLUS
 DOCUMENT NUMBER: 52:43620
 ORIGINAL REFERENCE NO.: 52:7819i,7820a-b
 TITLE: The complex structure and the solvent effect on the extractive separation of inorganic

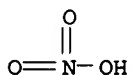
compounds. I. Extraction of bivalent metal
nitrates and perchlorates
AUTHOR(S): Libus, Wlodzimierz; Siekierska, Maria; Libus,
Zofia
CORPORATE SOURCE: Polska Akad. Nauk, Warsaw
SOURCE: Roczniki Chemii (1957), 31, 1293-1302
CODEN: ROCHAC; ISSN: 0035-7677
DOCUMENT TYPE: Journal
LANGUAGE: English

AB It is supposed that the partition coeffs. α of individual
complex compds. depend almost exclusively on the kind and number of
the coordinate ligands and the formal charge of the complex ions,
but to a lesser degree on the nature of the central ion.
Knowledge of the structure and composition of the complexes
in both phases (water-organic solvent) suffices for a suitable choice
of solvent. Extraction curves of Co, Ni, and Cu nitrates by butyl,
amyl, isoamyl, hexyl, and octyl alcs. were determined. The solute in
the organic solvent was mainly composed of ionized salts with
hydrated cation. The extraction curves change slightly for different
cations, but considerably for different solvents. The values of
 α of bivalent Co, Ni, Cu, Mn, Zn, Mg, Ca, and Sr
perchlorates in water and BuOH are, resp.: 7.2, 7.7, 6.9, 7.6,
8.3, 9.4, 9.5, and 12.9 ± 0.5 . They are almost equal for equal
initial concns. of the salts in water.
IT 13138-45-9, Nickel nitrate, $\text{Ni}(\text{NO}_3)_2$
(extraction by alcs.)
RN 13138-45-9 HCAPLUS
CN Nitric acid, nickel(2+) salt (8CI, 9CI) (CA INDEX NAME)



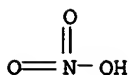
●1/2 Ni(II)

IT 3251-23-8, Copper nitrate, $\text{Cu}(\text{NO}_3)_2$ 10141-05-6,
Cobalt nitrate, $\text{Co}(\text{NO}_3)_2$
(extraction of, by alcs.)
RN 3251-23-8 HCAPLUS
CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



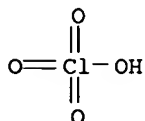
●1/2 Cu(II)

RN 10141-05-6 HCAPLUS
CN Nitric acid, cobalt(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Co(II)

IT 13770-18-8, Copper perchlorate, $\text{Cu}(\text{ClO}_4)_2$
 (partition between BuOH and H₂O)
 RN 13770-18-8 HCAPLUS
 CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

CC 2 (General and Physical Chemistry)
 IT 13138-45-9, Nickel nitrate, $\text{Ni}(\text{NO}_3)_2$
 (extraction by alcs.)
 IT 3251-23-8, Copper nitrate, $\text{Cu}(\text{NO}_3)_2$ 10141-05-6,
 Cobalt nitrate, $\text{Co}(\text{NO}_3)_2$
 (extraction of, by alcs.)
 IT 10034-81-8, Magnesium perchlorate, $\text{Mg}(\text{ClO}_4)_2$ 13450-97-0,
 Strontium perchlorate 13455-31-7, Cobalt perchlorate, $\text{Co}(\text{ClO}_4)_2$
 13477-36-6, Calcium perchlorate 13637-61-1, Zinc perchlorate
 13637-71-3, Nickel perchlorate, $\text{Ni}(\text{ClO}_4)_2$ 13770-16-6, Manganese
 perchlorate, $\text{Mn}(\text{ClO}_4)_2$ 13770-18-8, Copper perchlorate,
 $\text{Cu}(\text{ClO}_4)_2$
 (partition between BuOH and H₂O)

L88 ANSWER 45 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1957:75513 HCAPLUS

DOCUMENT NUMBER: 51:75513

ORIGINAL REFERENCE NO.: 51:13568g-h

TITLE: Solvation of copper and cobalt ions in
 alcohol-water mixtures. II.
 Absorption spectra of copper and cobalt
 nitrates in water and absolute aliphatic
 alcohols

AUTHOR(S): Minc, Stefan; Libus, Wlodzimierz

SOURCE: Roczniki Chem. (1956), 30, 537

DOCUMENT TYPE: Journal

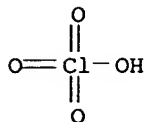
LANGUAGE: English

AB cf. C.A. 51, 2391c. Extinction curves of Cu^{++} and Co^{+++} nitrates
 in H₂O and absolute aliphatic alcs. were determined. It was established
 that the changes in spectra are caused by the changes of the
 composition of the solvation cation layers. The following
 conclusions are drawn: the tested solns. have optical stability
 within the range of low concns.; copper perchlorate has a spectrum
 identical with Cu^{++} nitrate in water or EtOH.; addition of large
 vols. of nonpolar solvents (e.g., benzene) to the alc. solution of
 the salt does not change its absorption spectrum.

IT 13770-18-8, Copper perchlorate, $\text{Cu}(\text{ClO}_4)_2$
 (spectrum of, in H₂O and absolute aliphatic alcs.)

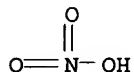
RN 13770-18-8 HCAPLUS

CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



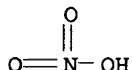
● 1/2 Cu(II)

IT 10141-05-6, Cobalt nitrate, Co(NO₃)₂
 (spectrum of, in aqueous alc. solns.)
 RN 10141-05-6 HCAPLUS
 CN Nitric acid, cobalt(2+) salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Co(II)

IT 3251-23-8, Copper nitrate, Cu(NO₃)₂
 (spectrum of, in water and absolute aliphatic alcs.)
 RN 3251-23-8 HCAPLUS
 CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Cu(II)

CC 3 (Electronic Phenomena and Spectra)
 IT 13770-18-8, Copper perchlorate, Cu(ClO₄)₂
 (spectrum of, in H₂O and absolute aliphatic alcs.)
 IT 10141-05-6, Cobalt nitrate, Co(NO₃)₂
 (spectrum of, in aqueous alc. solns.)
 IT 3251-23-8, Copper nitrate, Cu(NO₃)₂
 (spectrum of, in water and absolute aliphatic alcs.)

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L87 ANSWER 1 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
 TI Silver under-layers for electroless cobalt alloys
 IN Lopatin, Sergey D.; Shanmugasundrum, Arulkumar; Shacham-diamand, Yosef
 L87 ANSWER 2 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
 TI Organometallic precursor **composition** and method of forming metal film or pattern using the same
 IN Hwang, Euk Che; Lee, Sang Yoon; Byun, Young Hun; Ryu, Joon Sung; Son, Hae Jung

- L87 ANSWER 3 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Gas-Phase Ion/Ion Reactions of Multiply Protonated Polypeptides
with Metal-Containing Anions
AU Newton, Kelly A.; Amunugama, Ravi; McLuckey, Scott A.
- L87 ANSWER 4 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Relationship between the Ratio of Ligand to Metal and the
Coordinating Ability of Anions. Synthesis and Structural
Properties of AgX-Bearing Bis(4-pyridyl)dimethylsilane (X- = NO2-,
NO3-, CF3SO3-, and PF6-)
AU Lee, Jung Woon; Kim, Eun Ae; Kim, Yun Ju; Lee, Young-A.; Pak,
Youngshang; Jung, Ok-Sang
- L87 ANSWER 5 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Unusual separation property of propylene/propane mixtures through
polymer/silver complex membranes containing mixed salts
AU Kim, Jong Hak; Park, Su Mi; Won, Jongok; Kang, Yong Soo
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TI Corrosion resistant coatings with good adhesion to metals
IN Stoffer, James; O'Keefe, Thomas; Morris, Eric; Yu, Pu; Hayes,
Scott A.
- L87 ANSWER 7 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Deposition products and medical composite materials
IN Djokic, Stojan
- L87 ANSWER 8 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Process for the separation of olefins from paraffins using
permselective membranes
IN Herrera, Patricio S.; Feng, Xianshe; Payzant, John Donald; Kim,
Jeong-hoon
- L87 ANSWER 9 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Method for preparing lanthanide-containing epoxy polymer for
optics and quantum electronics
IN Amirova, L. M.; Fomin, V. P.; Amirov, R. R.; Andrianov, S. N.
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TI Silver or copper compound-activated adsorbents for separation of
unsaturated hydrocarbons from gas mixtures
IN Choudary, Nettem Venkateswarlu; Kumar, Prakash; Puranik,
Vijayalakshmi Ravi; Bhat, Sodankur Garadi Thirumaleshwara
- L87 ANSWER 11 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Analysis of the glass transition behavior of polymer-salt
complexes: An extended configurational entropy model
AU Kim, Jong Hak; Min, Byoung Ryul; Won, Jongok; Kang, Yong Soo
- L87 ANSWER 12 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Electroless metallization of non-conductive plastic surfaces using
tin sensitizer and silver catalyst
IN Joshi, Nayan H.
- L87 ANSWER 13 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Polymer composites containing nanometer metal granules
and manufacturing methods therefor
IN Won, Jeon Ok; Kang, Yon Soo; Chung, Bom Sok; Yoon, Yo Sang
- L87 ANSWER 14 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Method for producing trimer of indole derivative by oxidative
cyclotrimerization of indole derivative, and trimer of indole
derivative and laminated structure thereof
IN Maeda, Shinichi; Momose, Fumino; Saitoh, Yoshikazu; Saitoh,
Takashi

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TI Light-transforming polymeric composition
IN Anisimov, V. M.; Anisimova, O. M.; Zaychenko, N. L.;
Mardaleyshvili, I. R.; Marevtsev, V. S.; Ostrovskii, M. A.;
Shienok, A. I.
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TI Adsorbents, method for the preparation and method for the
separation of unsaturated hydrocarbons for gas mixtures
IN Cho, Soon Haeng; Han, Sang Sup; Kim, Jong Nam; Choudary, Nettem
Venkateswarlu; Kumar, Prakash; Bhat, Sodankoor Garadi
Thirumaleshwara
- L87 ANSWER 17 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Atom transfer polymerization for manufacture of long-chain alkyl
poly(meth)acrylates as lubricating oil additives
IN Roos, Sebastian; Eisenberg, Boris; Bollinger, Joseph Martin;
Scherer, Markus
- L87 ANSWER 18 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Atom transfer radical polymerization for manufacture of
polyacrylates and polymethacrylates as lubricating oil additives
IN Roos, Sebastian; Eisenberg, Boris; Mueller, Michael
- L87 ANSWER 19 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Representation of nonideality in concentrated electrolyte
solutions using the Electrolyte NRTL model with
concentration-dependent parameters
AU Abovsky, V.; Liu, Y.; Watanasiri, S.
- L87 ANSWER 20 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Electrolytic materials for modulating light and an electrochromic
device containing them
IN Caillot, Eric Gilles Charles; Herlem, Michel Paul; Szekely,
Marianne Claire Martin
- L87 ANSWER 21 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Estimation of the Pitzer equation parameters for aqueous
complexes. A case study for uranium at 298.15 K and 1 atm
AU Plyasunov, Andrey; Fanghanel, Thomas; Grenthe, Ingmar
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TI Method of manufacturing passive elements using conductive
polypyrrole formulations
IN Murphy, Oliver J.; Hodko, Dalibor; Andrews, Craig C.; Clarke, Eric
T.; Chepin, Suchitra
- L87 ANSWER 23 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Stable solutions of curing accelerators for epoxy resins
IN Wegmann, Alex; Wolleb, Heinz
- L87 ANSWER 24 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Formation of inorganic conductive coatings on substrates
IN Moran, William P.
- L87 ANSWER 25 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Stabilized salt-containing sols or gels for mixing with polymer
latexes in the manufacture of coatings
IN Kissel, Charles L.
- L87 ANSWER 26 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Photoactivation type physical developer. II. Comparison of
palladium nuclei and silver nuclei in photoactivation type
physical development
AU Tanaka, Katsuhiko; Kokado, Hiroshi

L87 ANSWER 27 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Study of the reaction of cobalt(II) with some sulfoxides
AU Fernandez, N. F.; Ukraintsev, V. B.

L87 ANSWER 28 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Triazines and crosslinked polymers or copolymers
IN Emerson, William E.; Dorfman, Edwin

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